

Sequence Listing



<110> Eaton, Dan L.  
Filvaroff, Ellen  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, Christopher J.  
Gurney, Austin L.  
Watanabe, Colin K.  
Wood, William I.

<120> SECRETED AND TRANSMEMBRANE POLYPEPTIDES AND NUCLEIC  
ACIDS ENCODING THE SAME

<130> P3230R1C22

<150> 60/063435

<151> 1997-10-29

<150> 60/064215

<151> 1997-10-29

<150> 60/082797

<151> 1998-04-22

<150> 60/083495

<151> 1998-04-29

<150> 60/085579

<151> 1998-05-15

<150> 60/087759

<151> 1998-06-02

<150> 60/088021

<151> 1998-06-04

<150> 60/088029

<151> 1998-06-04

<150> 60/088030

<151> 1998-06-04

<150> 60/088734

<151> 1998-06-10

<150> 60/088740

<151> 1998-06-10

<150> 60/088811

<151> 1998-06-10

<150> 60/088824

<151> 1998-06-10

<150> 60/088825

<151> 1998-06-10

<150> 60/088863

<151> 1998-06-11

<150> 60/089105

<151> 1998-06-12

<150> 60/089514

<151> 1998-06-16

<150> 60/089653

<151> 1998-06-17

<150> 60/089952

<151> 1998-06-19

<150> 60/090246

<151> 1998-06-22

<150> 60/090444

<151> 1998-06-24

<150> 60/090688

<151> 1998-06-25

<150> 60/090696

<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26

<150> 60/091628

<151> 1998-07-02

<150> 60/096012

<151> 1998-08-10

<150> 60/096757

<151> 1998-08-17

<150> 60/096949

<151> 1998-08-18

<150> 60/096959

<151> 1998-08-18

<150> 60/097954

<151> 1998-08-26

<150> 60/097971

<151> 1998-08-26

<150> 60/097979

<151> 1998-08-26

<150> 60/098749

<151> 1998-09-01

<150> 60/099741

<151> 1998-09-10

<150> 60/099763

<151> 1998-09-10

<150> 60/099792

<151> 1998-09-10

<150> 60/099812

<151> 1998-09-10

<150> 60/099815

<151> 1998-09-10

<150> 60/100627

<151> 1998-09-16

<150> 60/100662

<151> 1998-09-16

<150> 60/100683

<151> 1998-09-17

<150> 60/100684

<151> 1998-09-17

<150> 60/100930

<151> 1998-09-17

<150> 60/101279

<151> 1998-09-22

<150> 60/101475

<151> 1998-09-23

<150> 60/101738

<151> 1998-09-24

<150> 60/101743

<151> 1998-09-24

<150> 60/101916

<151> 1998-09-24

<150> 60/102570

<151> 1998-09-30

<150> 60/103449

<151> 1998-10-06

<150> 60/103678

<151> 1998-10-08

<150> 60/103679

<151> 1998-10-08

<150> 60/103711

<151> 1998-10-08

<150> 60/105000

<151> 1998-10-20

<150> 60/105002

<151> 1998-10-20

<150> 60/105881

<151> 1998-10-27

<150> 60/106030

<151> 1998-10-28

<150> 60/106464

<151> 1998-10-30

<150> 60/106856

<151> 1998-11-03

<150> 60/108807

<151> 1998-11-17

<150> 60/112419

<151> 1998-12-15

<150> 60/112422

<151> 1998-12-15

<150> 60/112853

<151> 1998-12-16

<150> 60/113011

<151> 1998-12-16

<150> 60/112854

<151> 1998-12-16

<150> 60/113300

<151> 1998-12-22

<150> 60/113408

<151> 1998-12-22

<150> 60/113430

<151> 1998-12-23

<150> 60/113621

<151> 1998-12-23

<150> 60/114223

<151> 1998-12-30

<150> 60/115614



<151> 1999-01-12

<150> 60/116527

<151> 1999-01-20

<150> 60/116843

<151> 1999-01-22

<150> 60/119285

<151> 1999-02-09

<150> 60/119287

<151> 1999-02-09

<150> 60/119525

<151> 1999-02-10

<150> 60/119549

<151> 1999-02-10

<150> 60/120014

<151> 1999-02-11

<150> 60/129122

<151> 1999-04-13

<150> 60/129674

<151> 1999-04-16

<150> 60/131291

<151> 1999-04-27

<150> 60/138387

<151> 1999-06-09

<150> 60/144791

<151> 1999-07-20

<150> 60/169495

<151> 1999-12-07

<150> 60/175481

<151> 2000-01-11

<150> 60/191007

<151> 2000-03-21

<150> 60/199397

<151> 2000-04-25

<150> 09/380139

<151> 1998-08-25

<150> 09/311832

<151> 1999-05-14

<150> 09/380137

<151> 1999-08-25

<150> 09/380138

<151> 1999-08-25

<150> 09/380142

<151> 1999-08-25

<150> 09/397342

<151> 1999-09-15

<150> 09/403297

<151> 1999-10-18

<150> 09/423844

<151> 1999-11-12

<150> 09/644848

<151> 2000-08-22

<150> 09/665350

<151> 2000-09-18

<150> 09/664610

<151> 2000-09-18

<150> 09/709238

<151> 2000-11-08

<150> 09/747259

<151> 2000-12-20

<150> 09/816744

<151> 2001-03-22

<150> 09/854208

<151> 2001-05-10

<150> 09/854280

<151> 2001-05-10

<150> 09/870574

<151> 2001-05-30

<150> 09/874503

<151> 2001-06-05

<150> 09/869599

<151> 2001-06-29

<150> 09/908,827

<151> 2001-07-18

<150> PCT/US98/19330

<151> 1998-09-16

<150> PCT/US99/05028

<151> 1999-03-08

<150> PCT/US99/10733  
<151> 1999-05-14

<150> PCT/US99/12252  
<151> 1999-06-02

<150> PCT/US99/20111  
<151> 1999-09-01

<150> PCT/US99/21090  
<151> 1999-09-15

<150> PCT/US99/21194  
<151> 1999-09-15

<150> PCT/US99/30720  
<151> 1999-12-22

<150> PCT/US00/04341  
<151> 2000-02-18

<150> PCT/US00/04342  
<151> 2000-02-18

<150> PCT/US00/04414  
<151> 2000-02-22

<150> PCT/US00/05601  
<151> 2000-03-01

<150> PCT/US00/08439  
<151> 2000-03-30

<150> PCT/US00/14042  
<151> 2000-05-22

<150> PCT/US00/15264  
<151> 2000-06-02

<150> PCT/US00/23522  
<151> 2000-08-23

<150> PCT/US00/23328  
<151> 2000-08-24

<150> PCT/US00/30873  
<151> 2000-11-10

<150> PCT/US00/32378  
<151> 2000-12-01

<150> PCT/US00/34956  
<151> 2000-12-20

<150> PCT/US01/06520

<151> 2001-02-28

<150> PCT/US01/06666

<151> 2001-03-01

<150> PCT/US01/17443

<151> 2001-05-30

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 170

<210> 1

<211> 1173

<212> DNA

<213> Homo Sapien

<400> 1

ggggccttcgg cgccagcggc cagcgctagt cggctctggta aggatttaca 50  
aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100  
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150  
cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200  
cattactgca gtaacactcc accatataga cccggcttta ccttatatca 250  
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300  
aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350  
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400  
ctggccttgt acttgaata ctgagttggt taggactttc tattgtggca 450  
aacttccaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500  
tacctttggt atgggctcat tatatatggt tgttcagacc atcctttcct 550  
accaaagca gcccaaatc catggcaaac aagtcttctg gatcagactg 600  
ttgttggtta tctggtgtgg agtaagtga cttagcatgc tgacttgctc 650  
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700  
attggaaccc cgaggacaaa gggttatgtgc ttcacatgat cactactgca 750

gcagaatggg ctatgtcatt ttccttcttt gggtttttcc tgacttacat 800  
tcgtgatttt cagaaaattt ctttacgggt ggaagccaat ttacatggat 850  
taaccctcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900  
ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950  
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000  
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050  
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100  
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150  
gaaaataaag tcaaaagact atg 1173

<210> 2  
<211> 266  
<212> PRT  
<213> Homo Sapien

<400> 2  
Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu  
1 5 10 15  
Val Ile Trp Thr Ser Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala  
20 25 30  
Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp  
35 40 45  
Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu  
50 55 60  
Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr  
65 70 75  
Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys  
80 85 90  
Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly  
95 100 105  
Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala  
110 115 120  
His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr  
125 130 135  
Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile  
140 145 150  
His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp  
155 160 165

Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu
				170					175					180
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp
				185					190					195
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala
				200					205					210
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr
				215					220					225
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn
				230					235					240
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn
				245					250					255
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile				
				260					265					

<210> 3

<211> 2037

<212> DNA

<213> Homo Sapien

<400> 3

```

cggacgcgtg ggcggacgcg tgggggagag ccgcagtccc ggctgcagca 50
cctgggagaa ggcagaccgt gtgagggggc ctgtggcccc agcgtgctgt 100
ggcctcgggg agtgggaagt ggaggcagga gccttcctta cacttcgcca 150
tgagtttctt catcgactcc agcatcatga ttacctcca gatactattt 200
tttgattttg ggtggctttt cttcatgcgc caattgttta aagactatga 250
gatacgtcag tatgttgtac aggtgatctt ctccgtgacg tttgcatttt 300
cttgacccat gtttgagctc atcatctttg aaatcttagg agtattgaat 350
agcagctccc gttattttca ctggaaaatg aacctgtgtg taattctgct 400
gatcctgggt ttcattggtc ctttttacat tggctatttt attgtgagca 450
atatccgact actgcataaa caacgactgc ttttttctg tctcttatgg 500
ctgaccttta tgtatttctt ctggaaacta ggagatccct ttcccattct 550
cagcccaaaa catgggatct tatccataga acagctcatc agccgggttg 600
gtgtgattgg agtgactctc atggctcttc tttctggatt tgggtgctgtc 650
aactgcccac acacttacat gtcttacttc ctcaggaatg tgactgacac 700
ggatattcta gccctggaac ggcgactgct gcaaaccatg gatatgatca 750

```

taagcaaaaa gaaaaggatg gcaatggcac ggagaacaat gttccagaag 800  
 ggggaagtgc ataacaacc atcaggtttc tggggaatga taaaagtgt 850  
 taccattca gcatcaggaa gtgaaaatct tactcttatt caacaggaag 900  
 tggatgcttt ggaagaatta agcaggcagc tttttctgga aacagctgat 950  
 ctatatgcta ccaaggagag aatagaatac tccaaaacct tcaaggggaa 1000  
 atattttaat tttcttggtt actttttctc tatttactgt gtttgaaaa 1050  
 ttttcatggc taccatcaat attgtttttg atcgagttgg gaaaacggat 1100  
 cctgtcacia gaggcattga gatcactgtg aattatctgg gaatccaatt 1150  
 tgatgtgaag ttttgggtccc aacacatttc cttcattctt gttggaataa 1200  
 tcatcgtcac atccatcaga ggattgctga tcaactctac caagttcttt 1250  
 tatgccatct ctagcagtaa gtctctcaat gtcattgtcc tgctattagc 1300  
 acagataatg ggcatgtact ttgtctctc tgtgctgctg atccgaatga 1350  
 gtatgccttt agaataccgc accataatca ctgaagtcct tggagaactg 1400  
 cagttcaact tctatcacgc ttggtttgat gtgatcttcc tggtcagcgc 1450  
 tctctctagc atactcttcc tctatttggc tcacaaacag gcaccagaga 1500  
 agcaaatggc accttgaact taagcctact acagactgtt agaggccagt 1550  
 ggtttcaaaa tttagatata agagggggga aaaatggaac cagggcctga 1600  
 cattttataa acaaacaaaa tgctatggta gcatttttca ctttcatagc 1650  
 atactcttc cccgtcaggt gatactatga ccatgagtag catcagccag 1700  
 aacatgagag ggagaactaa ctcaagacaa tactcagcag agagcatccc 1750  
 gtgtggatat gaggctggtg tagaggcgga gaggagcaa gaaactaaag 1800  
 gtgaaaaata cactggaact ctggggcaag acatgtctat ggtagctgag 1850  
 ccaaacacgt aggatctccg ttttaagggt cacatggaaa aggttatagc 1900  
 ttgacctga gattgactca ttaaaatcag agactgtaac aaaaaaaaaa 1950  
 aaaaaaaaaa agggcgccgc cgactctaga gtcgacctgc agaagcttgg 2000  
 ccgccatggc ccaacttggt tattgcagct tataatg 2037

<210> 4  
 <211> 455  
 <212> PRT  
 <213> Homo Sapien

<400> 4

Met	Ser	Phe	Leu	Ile	Asp	Ser	Ser	Ile	Met	Ile	Thr	Ser	Gln	Ile
1				5					10					15
Leu	Phe	Phe	Gly	Phe	Gly	Trp	Leu	Phe	Phe	Met	Arg	Gln	Leu	Phe
				20					25					30
Lys	Asp	Tyr	Glu	Ile	Arg	Gln	Tyr	Val	Val	Gln	Val	Ile	Phe	Ser
				35					40					45
Val	Thr	Phe	Ala	Phe	Ser	Cys	Thr	Met	Phe	Glu	Leu	Ile	Ile	Phe
				50					55					60
Glu	Ile	Leu	Gly	Val	Leu	Asn	Ser	Ser	Ser	Arg	Tyr	Phe	His	Trp
				65					70					75
Lys	Met	Asn	Leu	Cys	Val	Ile	Leu	Leu	Ile	Leu	Val	Phe	Met	Val
				80					85					90
Pro	Phe	Tyr	Ile	Gly	Tyr	Phe	Ile	Val	Ser	Asn	Ile	Arg	Leu	Leu
				95					100					105
His	Lys	Gln	Arg	Leu	Leu	Phe	Ser	Cys	Leu	Leu	Trp	Leu	Thr	Phe
				110					115					120
Met	Tyr	Phe	Phe	Trp	Lys	Leu	Gly	Asp	Pro	Phe	Pro	Ile	Leu	Ser
				125					130					135
Pro	Lys	His	Gly	Ile	Leu	Ser	Ile	Glu	Gln	Leu	Ile	Ser	Arg	Val
				140					145					150
Gly	Val	Ile	Gly	Val	Thr	Leu	Met	Ala	Leu	Leu	Ser	Gly	Phe	Gly
				155					160					165
Ala	Val	Asn	Cys	Pro	Tyr	Thr	Tyr	Met	Ser	Tyr	Phe	Leu	Arg	Asn
				170					175					180
Val	Thr	Asp	Thr	Asp	Ile	Leu	Ala	Leu	Glu	Arg	Arg	Leu	Leu	Gln
				185					190					195
Thr	Met	Asp	Met	Ile	Ile	Ser	Lys	Lys	Lys	Arg	Met	Ala	Met	Ala
				200					205					210
Arg	Arg	Thr	Met	Phe	Gln	Lys	Gly	Glu	Val	His	Asn	Lys	Pro	Ser
				215					220					225
Gly	Phe	Trp	Gly	Met	Ile	Lys	Ser	Val	Thr	Thr	Ser	Ala	Ser	Gly
				230					235					240
Ser	Glu	Asn	Leu	Thr	Leu	Ile	Gln	Gln	Glu	Val	Asp	Ala	Leu	Glu
				245					250					255
Glu	Leu	Ser	Arg	Gln	Leu	Phe	Leu	Glu	Thr	Ala	Asp	Leu	Tyr	Ala
				260					265					270
Thr	Lys	Glu	Arg	Ile	Glu	Tyr	Ser	Lys	Thr	Phe	Lys	Gly	Lys	Tyr
				275					280					285



Phe	Asn	Phe	Leu	Gly	Tyr	Phe	Phe	Ser	Ile	Tyr	Cys	Val	Trp	Lys
				290					295					300
Ile	Phe	Met	Ala	Thr	Ile	Asn	Ile	Val	Phe	Asp	Arg	Val	Gly	Lys
				305					310					315
Thr	Asp	Pro	Val	Thr	Arg	Gly	Ile	Glu	Ile	Thr	Val	Asn	Tyr	Leu
				320					325					330
Gly	Ile	Gln	Phe	Asp	Val	Lys	Phe	Trp	Ser	Gln	His	Ile	Ser	Phe
				335					340					345
Ile	Leu	Val	Gly	Ile	Ile	Ile	Val	Thr	Ser	Ile	Arg	Gly	Leu	Leu
				350					355					360
Ile	Thr	Leu	Thr	Lys	Phe	Phe	Tyr	Ala	Ile	Ser	Ser	Ser	Lys	Ser
				365					370					375
Ser	Asn	Val	Ile	Val	Leu	Leu	Leu	Ala	Gln	Ile	Met	Gly	Met	Tyr
				380					385					390
Phe	Val	Ser	Ser	Val	Leu	Leu	Ile	Arg	Met	Ser	Met	Pro	Leu	Glu
				395					400					405
Tyr	Arg	Thr	Ile	Ile	Thr	Glu	Val	Leu	Gly	Glu	Leu	Gln	Phe	Asn
				410					415					420
Phe	Tyr	His	Arg	Trp	Phe	Asp	Val	Ile	Phe	Leu	Val	Ser	Ala	Leu
				425					430					435
Ser	Ser	Ile	Leu	Phe	Leu	Tyr	Leu	Ala	His	Lys	Gln	Ala	Pro	Glu
				440					445					450
Lys	Gln	Met	Ala	Pro										
				455										

<210> 5

<211> 2372

<212> DNA

<213> Homo Sapien

<400> 5

```

agcagggaaa tccggatgtc tcggttatga agtggagcag tgagtgtgag 50
cctcaacata gttccagaac tctccatccg gactagttat tgagcatctg 100
cctctcatat caccagtggc catctgaggt gtttccttgg ctctgaaggg 150
gtaggcacga tggccaggtg cttcagcctg gtgttgcttc tcacttccat 200
ctggaccacg aggctcctgg tccaaggctc tttgcgtgca gaagagcttt 250
ccatccaggt gtcatgcaga attatgggga tcacccttgt gagcaaaaag 300
gcgaaccagc agctgaattt cacagaagct aaggaggcct gtaggctgct 350
gggactaagt ttggccggca aggaccaagt tgaaacagcc ttgaaagcta 400

```

gctttgaaac ttgcagctat ggctgggttg gagatggatt cgtgggtcatc 450  
tctaggatta gcccaaacc caagtgtggg aaaaatgggg tgggtgtcct 500  
gatttggaag gttccagtga gccgacagtt tgcagcctat tgttacaact 550  
catctgatac ttggactaac tcgtgcattc cagaaattat caccaccaa 600  
gatcccatat tcaacactca aactgcaaca caaacaacag aatttattgt 650  
cagtgcagct acctactcgg tggcatcccc ttactctaca atacctgcc 700  
ctactactac tcctcctgct ccagcttcca cttctattcc acggagaaaa 750  
aaattgattt gtgtcacaga agtttttatg gaaactagca ccatgtctac 800  
agaaactgaa ccatttggtt aaaataaagc agcattcaag aatgaagctg 850  
ctgggttttg aggtgtcccc acggctctgc tagtgcttgc tctcctcttc 900  
tttggtgctg cagctggtct tggattttgc tatgtcaaaa ggtatgtgaa 950  
ggccttcctt ttacaaaca agaatcagca gaaggaaatg atcgaaacca 1000  
aagtagtaaa ggaggagaag gccaatgata gcaaccctaa tgaggaaatca 1050  
aagaaaactg ataaaaacc agaagagtcc aagagtccaa gcaaaactac 1100  
cgtgcgatgc ctggaagctg aagtttagat gagacagaaa tgaggagaca 1150  
cacctgaggc tggtttcttt catgctcctt accctgcccc agctggggaa 1200  
atcaaaaggg ccaaagaacc aaagaagaaa gtccaccctt ggttcctaac 1250  
tggaatcagc tcaggactgc cattggacta tggagtgcac caaagagaat 1300  
gcccttctcc ttattgtaac cctgtctgga tcctatctc ctacctcaa 1350  
agcttccac ggcccttcta gcctggctat gtcctaataa tatccactg 1400  
ggagaaagga gttttgcaa gtgcaaggac ctaaaacatc tcatcagtat 1450  
ccagtggtaa aaaggcctcc tggctgtctg aggctaggtg ggttgaaagc 1500  
caaggagtca ctgagaccaa ggctttctct actgattccg cagctcagac 1550  
cctttcttca gctctgaaag agaaacacgt atcccacctg acatgtcctt 1600  
ctgagcccg taagagcaaa agaatggcag aaaagtttag cccctgaaag 1650  
ccatggagat tctcataact tgagacctaa tctctgtaaa gctaaaataa 1700  
agaaatagaa caaggctgag gatacgacag tacactgtca gcagggactg 1750  
taaacacaga caggggtcaaa gtgttttctc tgaacacatt gagttggaat 1800

cactgttttag aacacacaca cttacttttt ctggtctcta ccactgctga 1850  
 tattttctct aggaaatata cttttacaag taacaaaaat aaaaactctt 1900  
 ataaatttct atttttatct gagttacaga aatgattact aaggaagatt 1950  
 actcagtaat ttgttttaaaa agtaataaaa ttcaacaaac atttgctgaa 2000  
 tagctactat atgtcaagtg ctgtgcaagg tattacactc tgtaattgaa 2050  
 tattattcct caaaaaattg cacatagtag aacgctatct ggaagctat 2100  
 ttttttcagt ttgatattt ctagcttatc tacttcctaaa ctaattttta 2150  
 tttttgctga gactaatctt attcattttc tctaatatgg caaccattat 2200  
 aaccttaatt tattattaac atacctaaga agtacattgt tacctctata 2250  
 taccaaagca ctttttaaaa gtgccattaa caaatgtatc actagccctc 2300  
 ctttttccaa caagaaggga ctgagagatg cagaaatatt tgtgacaaaa 2350  
 aattaaagca tttagaaaac tt 2372

<210> 6  
 <211> 322  
 <212> PRT  
 <213> Homo Sapien

<400> 6  
 Met Ala Arg Cys Phe Ser Leu Val Leu Leu Leu Thr Ser Ile Trp  
 1 5 10 15  
 Thr Thr Arg Leu Leu Val Gln Gly Ser Leu Arg Ala Glu Glu Leu  
 20 25 30  
 Ser Ile Gln Val Ser Cys Arg Ile Met Gly Ile Thr Leu Val Ser  
 35 40 45  
 Lys Lys Ala Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala  
 50 55 60  
 Cys Arg Leu Leu Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu  
 65 70 75  
 Thr Ala Leu Lys Ala Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val  
 80 85 90  
 Gly Asp Gly Phe Val Val Ile Ser Arg Ile Ser Pro Asn Pro Lys  
 95 100 105  
 Cys Gly Lys Asn Gly Val Gly Val Leu Ile Trp Lys Val Pro Val  
 110 115 120  
 Ser Arg Gln Phe Ala Ala Tyr Cys Tyr Asn Ser Ser Asp Thr Trp  
 125 130 135

Thr	Asn	Ser	Cys	Ile	Pro	Glu	Ile	Ile	Thr	Thr	Lys	Asp	Pro	Ile	
				140					145					150	
Phe	Asn	Thr	Gln	Thr	Ala	Thr	Gln	Thr	Thr	Glu	Phe	Ile	Val	Ser	
				155					160					165	
Asp	Ser	Thr	Tyr	Ser	Val	Ala	Ser	Pro	Tyr	Ser	Thr	Ile	Pro	Ala	
				170					175					180	
Pro	Thr	Thr	Thr	Pro	Pro	Ala	Pro	Ala	Ser	Thr	Ser	Ile	Pro	Arg	
				185					190					195	
Arg	Lys	Lys	Leu	Ile	Cys	Val	Thr	Glu	Val	Phe	Met	Glu	Thr	Ser	
				200					205					210	
Thr	Met	Ser	Thr	Glu	Thr	Glu	Pro	Phe	Val	Glu	Asn	Lys	Ala	Ala	
				215					220					225	
Phe	Lys	Asn	Glu	Ala	Ala	Gly	Phe	Gly	Gly	Val	Pro	Thr	Ala	Leu	
				230					235					240	
Leu	Val	Leu	Ala	Leu	Leu	Phe	Phe	Gly	Ala	Ala	Ala	Gly	Leu	Gly	
				245					250					255	
Phe	Cys	Tyr	Val	Lys	Arg	Tyr	Val	Lys	Ala	Phe	Pro	Phe	Thr	Asn	
				260					265					270	
Lys	Asn	Gln	Gln	Lys	Glu	Met	Ile	Glu	Thr	Lys	Val	Val	Lys	Glu	
				275					280					285	
Glu	Lys	Ala	Asn	Asp	Ser	Asn	Pro	Asn	Glu	Glu	Ser	Lys	Lys	Thr	
				290					295					300	
Asp	Lys	Asn	Pro	Glu	Glu	Ser	Lys	Ser	Pro	Ser	Lys	Thr	Thr	Val	
				305					310					315	
Arg	Cys	Leu	Glu	Ala	Glu	Val									
				320											

<210> 7  
 <211> 2586  
 <212> DNA  
 <213> Homo Sapien

<400> 7  
 cgccgcgctc ccgcacccgc ggcccgccea ccgcgcgcgt cccgcacatctg 50  
 caccgcgagc ccggcggcct cccggcgagg ggcgagcagat ccagtcgggc 100  
 ccgcagcgca actcggtcca gtcggggcgg cggctgcggg cgagagcg 150  
 agatgcagcg gcttggggcc accctgctgt gctgctgct ggcgggcg 200  
 gtccccacgg ccccgcgcc cgctccgacg gcgacctcg ctccagtcaa 250  
 gcccgcccg gctctcagct accgcgagga ggaggccacc ctcaatgaga 300

tgttccgcga ggttgaggaa ctgatggagg acacgcagca caaattgcgc 350  
agcgcggtgg aagagatgga ggcagaagaa gctgctgcta aagcatcatc 400  
agaagtgaac ctggcaaact tacctcccag ctatcacaat gagaccaaca 450  
cagacacgaa ggttggaat aataccatcc atgtgcaccg agaaattcac 500  
aagataacca acaaccagac tggacaaatg gtcttttcag agacagttat 550  
cacatctgtg ggagacgaag aaggcagaag gagccacgag tgcatcatcg 600  
acgaggactg tgggcccagc atgtactgcc agtttgccag cttccagtac 650  
acctgccagc catgccgggg ccagaggatg ctctgcaccg gggacagtga 700  
gtgctgtgga gaccagctgt gtgtctgggg tctactgcacc aaaatggcca 750  
ccaggggcag caatgggacc atctgtgaca accagaggga ctgccagccg 800  
gggctgtgct gtgccttcca gagaggcctg ctgttcctg tgtgcacacc 850  
cctgcccgctg gagggcgagc tttgccatga ccccgccagc cggcttctgg 900  
acctcatcac ctgggagcta gagcctgatg gagccttgga ccgatgccct 950  
tgtgccagtg gcctcctctg ccagccccac agccacagcc tgggtgtatgt 1000  
gtgcaagccg accttcgtgg ggagccgtga ccaagatggg gagatcctgc 1050  
tgcccagaga ggtccccgat gagtatgaag ttggcagctt catggaggag 1100  
gtgcgccagg agctggagga cctggagagg agcctgactg aagagatggc 1150  
gctgggggag cctgcggctg ccgccgctgc actgctggga ggggaagaga 1200  
tttagatctg gaccaggctg tgggtagatg tgcaatagaa atagctaatt 1250  
tatttcccca ggtgtgtgct ttaggcgtgg gctgaccagg cttcttccta 1300  
catcttcttc ccagtaagtt tcccctctgg cttgacagca tgaggtgttg 1350  
tgcatttggt cagctcccc aggetgttct ccaggcttca cagtctggtg 1400  
cttgggagag tcaggcaggg ttaaactgca ggagcagttt gccaccctg 1450  
tccagattat tggctgcttt gcctctacca gttggcagac agccgtttgt 1500  
tctacatggc tttgataatt gtttgagggg aggagatgga aacaatgtgg 1550  
agtctccctc tgattggttt tggggaaatg tggagaagag tgccctgctt 1600  
tgcaaacatc aacctggcaa aaatgcaaca aatgaatttt ccacgcagtt 1650  
ctttccatgg gcataggtaa gctgtgcctt cagctgttgc agatgaaatg 1700  
ttctgttcac cctgcattac atgtgtttat tcatccagca gtgttgctca 1750

gctcctacct ctgtgccagg gcagcatttt catatccaag atcaattccc 1800  
tctctcagca cagcctgggg aggggggtcat tgttctcctc gtccatcagg 1850  
gatctcagag gctcagagac tgcaagctgc ttgcccaagt cacacagcta 1900  
gtgaagacca gagcagtttc atctggttgt gactctaagc tcagtgtctt 1950  
ctccactacc ccacaccagc cttggtgccca ccaaaagtgc tccccaaaag 2000  
gaaggagaat gggatttttc ttgaggcatg cacatctgga attaaggtca 2050  
aactaattct cacatccctc taaaagtaaa ctactgttag gaacagcagt 2100  
gttctcacag tgtggggcag ccgtccttct aatgaagaca atgatattga 2150  
cactgtccct ctttggcagt tgcattagta actttgaaag gtatatgact 2200  
gagcgtagca tacagggttaa cctgcagaaa cagtacttag gtaattgtag 2250  
ggcgaggatt ataaatgaaa ttgcaaaat cacttagcag caactgaaga 2300  
caattatcaa ccacgtggag aaaatcaaac cgagcagggc tgtgtgaaac 2350  
atggttgtaa tatgcgactg cgaacactga actctacgcc actccacaaa 2400  
tgatgttttc aggtgtcatg gactgttgcc accatgtatt catccagagt 2450  
tcttaaagtt taaagttgca catgattgta taagcatgct ttctttgagt 2500  
tttaaattat gtataaacat aagttgcatt tagaaatcaa gcataaatca 2550  
cttcaactgc aaaaaaaaaa aaaaaaaaaa aaaaaa 2586

<210> 8  
<211> 350  
<212> PRT  
<213> Homo Sapien

<400> 8  
Met Gln Arg Leu Gly Ala Thr Leu Leu Cys Leu Leu Leu Ala Ala  
1 5 10 15  
Ala Val Pro Thr Ala Pro Ala Pro Ala Pro Thr Ala Thr Ser Ala  
20 25 30  
Pro Val Lys Pro Gly Pro Ala Leu Ser Tyr Pro Gln Glu Glu Ala  
35 40 45  
Thr Leu Asn Glu Met Phe Arg Glu Val Glu Glu Leu Met Glu Asp  
50 55 60  
Thr Gln His Lys Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu  
65 70 75  
Glu Ala Ala Ala Lys Ala Ser Ser Glu Val Asn Leu Ala Asn Leu

	80	85	90
Pro Pro Ser Tyr	His Asn Glu Thr Asn	Thr Asp Thr Lys Val	Gly 105
	95	100	
Asn Asn Thr Ile	His Val His Arg Glu	Ile His Lys Ile Thr	Asn 120
	110	115	
Asn Gln Thr Gly	Gln Met Val Phe Ser	Glu Thr Val Ile Thr	Ser 135
	125	130	
Val Gly Asp Glu	Glu Gly Arg Arg Ser	His Glu Cys Ile Ile	Asp 150
	140	145	
Glu Asp Cys Gly	Pro Ser Met Tyr Cys	Gln Phe Ala Ser Phe	Gln 165
	155	160	
Tyr Thr Cys Gln	Pro Cys Arg Gly Gln	Arg Met Leu Cys Thr	Arg 180
	170	175	
Asp Ser Glu Cys	Cys Gly Asp Gln Leu	Cys Val Trp Gly His	Cys 195
	185	190	
Thr Lys Met Ala	Thr Arg Gly Ser Asn	Gly Thr Ile Cys Asp	Asn 210
	200	205	
Gln Arg Asp Cys	Gln Pro Gly Leu Cys	Cys Ala Phe Gln Arg	Gly 225
	215	220	
Leu Leu Phe Pro	Val Cys Thr Pro Leu	Pro Val Glu Gly Glu	Leu 240
	230	235	
Cys His Asp Pro	Ala Ser Arg Leu Leu	Asp Leu Ile Thr Trp	Glu 255
	245	250	
Leu Glu Pro Asp	Gly Ala Leu Asp Arg	Cys Pro Cys Ala Ser	Gly 270
	260	265	
Leu Leu Cys Gln	Pro His Ser His Ser	Leu Val Tyr Val Cys	Lys 285
	275	280	
Pro Thr Phe Val	Gly Ser Arg Asp Gln	Asp Gly Glu Ile Leu	Leu 300
	290	295	
Pro Arg Glu Val	Pro Asp Glu Tyr Glu	Val Gly Ser Phe Met	Glu 315
	305	310	
Glu Val Arg Gln	Glu Leu Glu Asp Leu	Glu Arg Ser Leu Thr	Glu 330
	320	325	
Glu Met Ala Leu	Gly Glu Pro Ala Ala	Ala Ala Ala Ala Leu	Leu 345
	335	340	
Gly Gly Glu Glu	Ile		
	350		

<211> 1395  
<212> DNA  
<213> Homo Sapien

<400> 9

```
cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggctga 100
tgtgctgtctt ccagggctac tcatccaaag gcctaatacca acgttctgtc 150
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
gccttcatcc gcacactccg ttaccacact gggtcattgg catttgagc 350
cctcatcctg acccttgtgc agatagcccg ggtcatcttg gagtatattg 400
accacaagct cagaggagtg cagaaccctg tagcccgtg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
ccgcaatgca tacatcatga tcgccatcta cgggaagaat ttctgtgtct 550
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggg 650
ggtcggaggc gtgggggtcc tgtccttctt ttttttctcc ggtcgcatcc 700
cggggctggg taaagacttt aagagcccc acctcaacta ttactggctg 750
cccatcatga cctccatcct gggggcctat gtcatcgcca gcggcttctt 800
cagcgttttc ggcatgtgtg tggacacgct cttcctctgc ttctggaag 850
acctggagcg gaacaacggc tccctggacc ggcctacta catgtccaag 900
agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
gaagaggaag aagtgcacgc tccggccctg atccaggact gcaccccacc 1000
cccaccgtcc agccatccaa cctcacttcg cttacaggt ctccattttg 1050
tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
acactttgag aggctgaggc gggcggatca cctgagtcag gagttcgaga 1150
ccagcctggc caacatggtg aaacctccgt ctctattaaa aatacaaaaa 1200
ttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggaggct 1250
gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
```



gatcgcgccca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350

aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 10

<211> 321

<212> PRT

<213> Homo Sapien

<400> 10

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1				5					10					15

Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
			20						25					30

Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
			35						40					45

Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
			50						55					60

Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
			65						70					75

Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
			80						85					90

Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
			95						100					105

Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
			110						115					120

Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
			125						130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys
			140						145					150

Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe
			155						160					165

Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn
			170						175					180

Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn
			185						190					195

Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu
			200						205					210

Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser
			215						220					225

Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe
			230						235					240

Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser
				245					250					255
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe
				260					265					270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu
				275					280					285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys
				290					295					300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp
				305					310					315
Asn	Lys	Lys	Arg	Lys	Lys									
				320										

<210> 11  
 <211> 1901  
 <212> DNA  
 <213> Homo Sapien

<400> 11  
 gccccgcgcc cggcgcggg cgcccgaagc cgggagccac cgccatgggg 50  
 gcctgcctgg gagcctgtc cctgtcagc tgcgcgtcct gcctctgcgg 100  
 ctctgcccc tgcatactgt gcagctgtg ccccgccagc cgcaactcca 150  
 ccgtgagccg cctcatcttc acgttcttcc tcttctctggg ggtgctggtg 200  
 tccatcatta tgctgagccc gggcgtggag agtcagctct acaagctgcc 250  
 ctgggtgtgt gaggaggggg ccgggatccc caccgtcctg cagggccaca 300  
 tcgactgtgg ctccctgctt ggctaccgag ctgtctaccg catgtgcttc 350  
 gccacggcgg ctttcttctt cttctttttt accctgtctc tgctctgcgt 400  
 gagcagcagc cgggaccccc gggctgccat ccagaatggg ttttggttct 450  
 ttaagttcct gatcctggtg ggcctcaccg tgggtgcctt ctacatccct 500  
 gacggctcct tcaccaacat ctggttctac ttcggcgtcg tgggtcctt 550  
 cctcttcata ctcatccagc tgggtgtgct catcgacttt gcgcactcct 600  
 ggaaccagcg gtggctgggc aaggccgagg agtgcgattc ccgtgcctgg 650  
 tacgcaggcc tcttcttctt cactctcttc ttctacttgc tgtcgatcgc 700  
 ggccgtggcg ctgatgttca tgtactacac tgagcccagc ggctgccacg 750  
 agggcaaggt cttcatcagc ctcaacctca cttctgtgtg ctgcgtgtcc 800  
 atcgtgtgtg tcttgcccaa ggtccaggac gccagccca actcgggtct 850

gctgcaggcc tcggtcatca ccctctacac catgtttgtc acctggtcag 900  
ccctatccag tatccctgaa cagaaatgca acccccattt gccaacccag 950  
ctgggcaacg agacagttgt ggcaggcccc gagggctatg agaccagtg 1000  
gtgggatgcc ccgagcattg tgggcctcat catcttcctc ctgtgcaccc 1050  
tcttcatcag tctgcgctcc tcagaccacc ggcaggtgaa cagcctgatg 1100  
cagaccgagg agtgcccacc tatgctagac gccacacagc agcagcagca 1150  
gcaggtggca gcctgtgagg gccgggcctt tgacaacgag caggacggcg 1200  
tcacctacag ctactccttc ttccacttct gcctggtgct ggcctcactg 1250  
cacgtcatga tgacgctcac caactggtac aagcccgggtg agacccgaa 1300  
gatgatcagc acgtggaccg ccgtgtgggt gaagatctgt gccagctggg 1350  
cagggctgct cctctacctg tggaccctgg tagccccact cctcctgcgc 1400  
aaccgcgact tcagctgagg cagcctcaca gcctgccatc tggtgccctc 1450  
tgccacctgg tgccctctcg ctcggtgaca gccaacctgc cccctcccca 1500  
caccaatcag ccaggctgag cccccacccc tgccccagct ccaggacctg 1550  
cccctgagcc gggccttcta gtcgtagtgc cttcagggtc cgaggagcat 1600  
caggctcctg cagagcccca tcccccgcc acaccacac ggtggagctg 1650  
cctcttcctt cccctcctcc ctgttgccca tactcagcat ctcggatgaa 1700  
agggctccct tgtcctcagg ctccacggga gcggggctgc tggagagagc 1750  
ggggaactcc caccacagtg gggcatccgg cactgaagcc ctggtgttcc 1800  
tggtcacgtc ccccagggga ccctgcccc ttcttggaact tcgtgcctta 1850  
ctgagtctct aagacttttt ctaataaaca agccagtgcg tgtaaaaaaa 1900

a 1901

<210> 12  
<211> 457  
<212> PRT  
<213> Homo Sapien

<400> 12  
Met Gly Ala Cys Leu Gly Ala Cys Ser Leu Leu Ser Cys Ala Ser  
1 5 10 15  
Cys Leu Cys Gly Ser Ala Pro Cys Ile Leu Cys Ser Cys Cys Pro  
20 25 30  
Ala Ser Arg Asn Ser Thr Val Ser Arg Leu Ile Phe Thr Phe Phe

	35	40	45
Leu Phe Leu Gly Val Leu Val Ser Ile Ile Met Leu Ser Pro Gly	50	55	60
Val Glu Ser Gln Leu Tyr Lys Leu Pro Trp Val Cys Glu Glu Gly	65	70	75
Ala Gly Ile Pro Thr Val Leu Gln Gly His Ile Asp Cys Gly Ser	80	85	90
Leu Leu Gly Tyr Arg Ala Val Tyr Arg Met Cys Phe Ala Thr Ala	95	100	105
Ala Phe Phe Phe Phe Phe Phe Thr Leu Leu Met Leu Cys Val Ser	110	115	120
Ser Ser Arg Asp Pro Arg Ala Ala Ile Gln Asn Gly Phe Trp Phe	125	130	135
Phe Lys Phe Leu Ile Leu Val Gly Leu Thr Val Gly Ala Phe Tyr	140	145	150
Ile Pro Asp Gly Ser Phe Thr Asn Ile Trp Phe Tyr Phe Gly Val	155	160	165
Val Gly Ser Phe Leu Phe Ile Leu Ile Gln Leu Val Leu Leu Ile	170	175	180
Asp Phe Ala His Ser Trp Asn Gln Arg Trp Leu Gly Lys Ala Glu	185	190	195
Glu Cys Asp Ser Arg Ala Trp Tyr Ala Gly Leu Phe Phe Phe Thr	200	205	210
Leu Leu Phe Tyr Leu Leu Ser Ile Ala Ala Val Ala Leu Met Phe	215	220	225
Met Tyr Tyr Thr Glu Pro Ser Gly Cys His Glu Gly Lys Val Phe	230	235	240
Ile Ser Leu Asn Leu Thr Phe Cys Val Cys Val Ser Ile Ala Ala	245	250	255
Val Leu Pro Lys Val Gln Asp Ala Gln Pro Asn Ser Gly Leu Leu	260	265	270
Gln Ala Ser Val Ile Thr Leu Tyr Thr Met Phe Val Thr Trp Ser	275	280	285
Ala Leu Ser Ser Ile Pro Glu Gln Lys Cys Asn Pro His Leu Pro	290	295	300
Thr Gln Leu Gly Asn Glu Thr Val Val Ala Gly Pro Glu Gly Tyr	305	310	315
Glu Thr Gln Trp Trp Asp Ala Pro Ser Ile Val Gly Leu Ile Ile			

	320		325		330
Phe Leu Leu Cys Thr Leu Phe Ile Ser Leu Arg Ser Ser Asp His					
	335		340		345
Arg Gln Val Asn Ser Leu Met Gln Thr Glu Glu Cys Pro Pro Met					
	350		355		360
Leu Asp Ala Thr Gln Gln Gln Gln Gln Gln Val Ala Ala Cys Glu					
	365		370		375
Gly Arg Ala Phe Asp Asn Glu Gln Asp Gly Val Thr Tyr Ser Tyr					
	380		385		390
Ser Phe Phe His Phe Cys Leu Val Leu Ala Ser Leu His Val Met					
	395		400		405
Met Thr Leu Thr Asn Trp Tyr Lys Pro Gly Glu Thr Arg Lys Met					
	410		415		420
Ile Ser Thr Trp Thr Ala Val Trp Val Lys Ile Cys Ala Ser Trp					
	425		430		435
Ala Gly Leu Leu Leu Tyr Leu Trp Thr Leu Val Ala Pro Leu Leu					
	440		445		450
Leu Arg Asn Arg Asp Phe Ser					
	455				

<210> 13  
 <211> 1572  
 <212> DNA  
 <213> Homo Sapien

<400> 13  
 cgggccagcc tggggcggcc ggccaggaac caccggttaa ggtgtcttct 50  
 ctttagggat ggtgaggttg gaaaaagact cctgtaaccc tcctccagga 100  
 tgaaccacct gccagaagac atggagaacg ctctcaccgg gagccagagc 150  
 tcccatgctt ctctgcgcaa tatccattcc atcaacccca cacaactcat 200  
 ggccaggatt gagtcctatg aaggaaggga aaagaaaggc atatctgatg 250  
 tcaggaggac tttctgtttg tttgtcacct ttgacctctt attcgtaaca 300  
 ttactgtgga taatagagtt aaatgtgaat ggaggcattg agaacacatt 350  
 agagaaggag gtgatgcagt atgactacta ttcttcatat tttgatatat 400  
 ttcttctggc agtttttcga tttaaagtgt taatacttgc atatgctgtg 450  
 tgcagactgc gccattggtg ggcaatagcg ttgacaacgg cagtgaccag 500  
 tgccttttta ctagcaaaag tgatcctttc gaagcttttc tctcaagggg 550

cttttggcta tgtgctgccc atcatttcat tcacacctgc ctggattgag 600  
 acgtgggttcc tggatttcaa agtggttacct caagaagcag aagaagaaaa 650  
 cagactcctg atagttcagg atgcttcaga gagggcagca cttatacctg 700  
 gtgggtctttc tgatggtcag ttttattccc ctctgaatc cgaagcagga 750  
 tctgaagaag ctgaagaaaa acaggacagt gagaaaccac ttttagaact 800  
 atgagtacta cttttgttaa atgtgaaaaa ccctcacaga aagtcacga 850  
 ggcaaaaaga ggcaggcagt ggagtctccc tgtcgacagt aaagttgaaa 900  
 tggtgacgtc cactgctggc tttattgaac agctaataaa gatttattta 950  
 ttgtaatacc tcacaaacgt tgtaccatat ccatgcacat ttagttgcct 1000  
 gcctgtggct ggtaaggtaa tgtcatgatt catcctctct tcagtgaagac 1050  
 tgagcctgat gtgttaacaa ataggtgaag aaagtcttgt gctgtattcc 1100  
 taatcaaaag acttaatata ttgaagtaac acttttttag taagcaagat 1150  
 acctttttat ttcaattcac agaattgaat ttttttgttt catgtctcag 1200  
 atttattttg tatttctttt ttaacactct acatttcctt tgttttttta 1250  
 ctcatgcaca tgtgctcttt gtacagtttt aaaaagtgtg ataaaatctg 1300  
 acatgtcaat gtggctagtt ttatttttct tgttttgcac tatgtgtatg 1350  
 gcctgaagtg ttggacttgc aaaaggggaa gaaaggaatt gcgaatacat 1400  
 gtaaaatgtc accagacatt tgtattattt ttatcatgaa atcatgtttt 1450  
 tctctgattg ttctgaaatg ttctaaatac tcttattttg aatgcacaaa 1500  
 atgacttaaa ccattcatat catgtttcct ttgcgttcag ccaatttcaa 1550  
 ttaaaatgaa ctaaattaaa aa 1572

<210> 14  
 <211> 234  
 <212> PRT  
 <213> Homo Sapien

<400> 14  
 Met Asn His Leu Pro Glu Asp Met Glu Asn Ala Leu Thr Gly Ser  
 1 5 10 15  
 Gln Ser Ser His Ala Ser Leu Arg Asn Ile His Ser Ile Asn Pro  
 20 25 30  
 Thr Gln Leu Met Ala Arg Ile Glu Ser Tyr Glu Gly Arg Glu Lys  
 35 40 45  
 Lys Gly Ile Ser Asp Val Arg Arg Thr Phe Cys Leu Phe Val Thr

50					55					60				
Phe	Asp	Leu	Leu	Phe	Val	Thr	Leu	Leu	Trp	Ile	Ile	Glu	Leu	Asn
				65					70					75
Val	Asn	Gly	Gly	Ile	Glu	Asn	Thr	Leu	Glu	Lys	Glu	Val	Met	Gln
				80					85					90
Tyr	Asp	Tyr	Tyr	Ser	Ser	Tyr	Phe	Asp	Ile	Phe	Leu	Leu	Ala	Val
				95					100					105
Phe	Arg	Phe	Lys	Val	Leu	Ile	Leu	Ala	Tyr	Ala	Val	Cys	Arg	Leu
				110					115					120
Arg	His	Trp	Trp	Ala	Ile	Ala	Leu	Thr	Thr	Ala	Val	Thr	Ser	Ala
				125					130					135
Phe	Leu	Leu	Ala	Lys	Val	Ile	Leu	Ser	Lys	Leu	Phe	Ser	Gln	Gly
				140					145					150
Ala	Phe	Gly	Tyr	Val	Leu	Pro	Ile	Ile	Ser	Phe	Ile	Leu	Ala	Trp
				155					160					165
Ile	Glu	Thr	Trp	Phe	Leu	Asp	Phe	Lys	Val	Leu	Pro	Gln	Glu	Ala
				170					175					180
Glu	Glu	Glu	Asn	Arg	Leu	Leu	Ile	Val	Gln	Asp	Ala	Ser	Glu	Arg
				185					190					195
Ala	Ala	Leu	Ile	Pro	Gly	Gly	Leu	Ser	Asp	Gly	Gln	Phe	Tyr	Ser
				200					205					210
Pro	Pro	Glu	Ser	Glu	Ala	Gly	Ser	Glu	Glu	Ala	Glu	Glu	Lys	Gln
				215					220					225
Asp	Ser	Glu	Lys	Pro	Leu	Leu	Glu	Leu						
				230										

<210> 15  
 <211> 2768  
 <212> DNA  
 <213> Homo Sapien

<400> 15  
 actcgaacgc agttgcttcg ggacccagga cccctcggg cccgaccgc 50  
 caggaaagac tgaggccgcg gcctgccccg cccggctccc tgcgccgccg 100  
 ccgcctcccg ggacagaaga tgtgctccag ggtccctctg ctgctgccgc 150  
 tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200  
 tgccagtgc gccagccaca gacagtcttc tgcactgcc gccaggggac 250  
 cacggtgccc cgagacgtgc caccgcacac ggtggggctg tacgtctttg 300  
 agaacggcat caccatgctc gacgcaggca gctttgccgg cctgccgggc 350

ctgcagctcc tggacctgtc acagaaccag atcgccagcc tgcccagcgg 400  
ggctcttcag ccactcgcca acctcagcaa cctggacctg acggccaaca 450  
ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500  
cgctcttacc tgggcaagaa ccgcatccgc cacatccagc ctggtgcctt 550  
cgacacgctc gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600  
gggcaactgcc cccgctgcg ctgccccgcc tgctgctgct ggacctcagc 650  
cacaacagcc tcttggccct ggagcccggc atcctggaca ctgccaacgt 700  
ggaggcgctg cggctggctg gtctggggct gcagcagctg gacgaggggc 750  
tcttcagccg cttgcgcaac ctccacgacc tggatgtgtc cgacaaccag 800  
ctggagcgag tgccacctgt gatccgaggc ctccggggcc tgacgcgcct 850  
gcggctggcc ggcaacaccc gcattgccca gctgcggccc gaggacctgg 900  
ccggcctggc tgccctgcag gagctggatg tgagcaacct aagcctgcag 950  
gccctgectg gcgacctctc gggcctcttc ccccgectgc ggctgctggc 1000  
agctgcccgc aacccttca actgcgtgtg cccctgagc tggtttgcc 1050  
cctgggtgcg cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100  
tgccacttcc cgcccaagaa cgctggccgg ctgctcctgg agcttgacta 1150  
cgccgacttt ggctgccag ccaccaccac cacagccaca gtgcccacca 1200  
cgaggcccggt ggtgcgggag ccacagcct tgtcttctag cttggctcct 1250  
acctggctta gcccacagc gccggccact gaggcccca gcccgccctc 1300  
cactgccccca ccgactgtag ggctgtccc ccagccccag gactgcccac 1350  
cgtccacctg cctcaatggg ggcacatgcc acctggggac acggcaccac 1400  
ctggcgtgct tgtgccccga aggcttcacg ggcctgtact gtgagagcca 1450  
gatggggcag gggacacggc ccagccctac accagtcacg ccgaggccac 1500  
cacggtccct gacctgggc atcgagccgg tgagccccac ctccctgcgc 1550  
gtggggctgc agcgctacct ccaggggagc tccgtgcagc tcaggagcct 1600  
ccgtctcacc tatcgcaacc tatcgggccc tgataagcgg ctggtgacgc 1650  
tgcgactgcc tgctcgctc gctgagtaca cggtcaccca gctgcggccc 1700  
aacgccactt actccgtctg tgtcatgcct ttggggcccg ggcgggtgcc 1750



ggagggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800  
 ccaaccacgc cccagtcacc caggcccgcg agggcaacct gccgctcctc 1850  
 attgcgcccc ccttggccgc ggtgctcctg gccgcgctgg ctgcggtggg 1900  
 ggcagcctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950  
 acaaagggca ggtggggcca ggggctgggc ccctggaact ggagggagtg 2000  
 aaggtccctt tggagccagg cccgaaggca acagagggcg gtggagagggc 2050  
 cctgcccagc ggggtctgagt gtgaggtgcc actcatgggc ttcccagggc 2100  
 ctggcctcca gtcaccctc cagcгаааgc cctacatcta agccagagag 2150  
 agacagggca gctggggccg ggctctcagc cagtgagatg gccagccccc 2200  
 tctgtctgcc acaccacgta agttctcagt cccaacctcg gggatgtgtg 2250  
 cagacagggc tgtgtgacca cagctgggccc ctgttcctc tggacctcgg 2300  
 tctcctcatc tgtgagatgc tgtggcccag ctgacgagcc ctaacgtccc 2350  
 cagaaccgag tgcctatgag gacagtgtcc gccctgccct ccgcaacgtg 2400  
 cagtccttgg gcacggcggg ccctgccatg tgctggtaac gcatgcctgg 2450  
 gtctgtctgg gctctccac tccaggcgga ccctgggggc cagtgaagga 2500  
 agtccccgga aagagcagag ggagagcggg taggcggctg tgtgactcta 2550  
 gtcttgggccc caggaagcga aggaacaaaa gaaactggaa aggaagatgc 2600  
 tttaggaaca tgttttgctt ttttaaaata tatatattta taagagatcc 2650  
 tttcccattht attctgggaa gatgtttttc aaactcagag acaaggactt 2700  
 tgggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750  
 aaaagatgaa gtgtgaaa 2768

<210> 16  
 <211> 673  
 <212> PRT  
 <213> Homo Sapien

<400> 16  
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu  
 1 5 10 15  
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys  
 20 25 30  
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr  
 35 40 45

Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe	
				50					55					60	
Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Gly	Ser	Phe	Ala	Gly	Leu	
				65					70					75	
Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser	
				80					85					90	
Leu	Pro	Ser	Gly	Val	Phe	Gln	Pro	Leu	Ala	Asn	Leu	Ser	Asn	Leu	
				95					100					105	
Asp	Leu	Thr	Ala	Asn	Arg	Leu	His	Glu	Ile	Thr	Asn	Glu	Thr	Phe	
				110					115					120	
Arg	Gly	Leu	Arg	Arg	Leu	Glu	Arg	Leu	Tyr	Leu	Gly	Lys	Asn	Arg	
				125					130					135	
Ile	Arg	His	Ile	Gln	Pro	Gly	Ala	Phe	Asp	Thr	Leu	Asp	Arg	Leu	
				140					145					150	
Leu	Glu	Leu	Lys	Leu	Gln	Asp	Asn	Glu	Leu	Arg	Ala	Leu	Pro	Pro	
				155					160					165	
Leu	Arg	Leu	Pro	Arg	Leu	Leu	Leu	Leu	Asp	Leu	Ser	His	Asn	Ser	
				170					175					180	
Leu	Leu	Ala	Leu	Glu	Pro	Gly	Ile	Leu	Asp	Thr	Ala	Asn	Val	Glu	
				185					190					195	
Ala	Leu	Arg	Leu	Ala	Gly	Leu	Gly	Leu	Gln	Gln	Leu	Asp	Glu	Gly	
				200					205					210	
Leu	Phe	Ser	Arg	Leu	Arg	Asn	Leu	His	Asp	Leu	Asp	Val	Ser	Asp	
				215					220					225	
Asn	Gln	Leu	Glu	Arg	Val	Pro	Pro	Val	Ile	Arg	Gly	Leu	Arg	Gly	
				230					235					240	
Leu	Thr	Arg	Leu	Arg	Leu	Ala	Gly	Asn	Thr	Arg	Ile	Ala	Gln	Leu	
				245					250					255	
Arg	Pro	Glu	Asp	Leu	Ala	Gly	Leu	Ala	Ala	Leu	Gln	Glu	Leu	Asp	
				260					265					270	
Val	Ser	Asn	Leu	Ser	Leu	Gln	Ala	Leu	Pro	Gly	Asp	Leu	Ser	Gly	
				275					280					285	
Leu	Phe	Pro	Arg	Leu	Arg	Leu	Leu	Ala	Ala	Ala	Arg	Asn	Pro	Phe	
				290					295					300	
Asn	Cys	Val	Cys	Pro	Leu	Ser	Trp	Phe	Gly	Pro	Trp	Val	Arg	Glu	
				305					310					315	
Ser	His	Val	Thr	Leu	Ala	Ser	Pro	Glu	Glu	Thr	Arg	Cys	His	Phe	
				320					325					330	

Pro	Pro	Lys	Asn	Ala	Gly	Arg	Leu	Leu	Leu	Glu	Leu	Asp	Tyr	Ala		335	340	345
Asp	Phe	Gly	Cys	Pro	Ala	Thr	Thr	Thr	Thr	Ala	Thr	Val	Pro	Thr		350	355	360
Thr	Arg	Pro	Val	Val	Arg	Glu	Pro	Thr	Ala	Leu	Ser	Ser	Ser	Leu		365	370	375
Ala	Pro	Thr	Trp	Leu	Ser	Pro	Thr	Ala	Pro	Ala	Thr	Glu	Ala	Pro		380	385	390
Ser	Pro	Pro	Ser	Thr	Ala	Pro	Pro	Thr	Val	Gly	Pro	Val	Pro	Gln		395	400	405
Pro	Gln	Asp	Cys	Pro	Pro	Ser	Thr	Cys	Leu	Asn	Gly	Gly	Thr	Cys		410	415	420
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly		425	430	435
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg		440	445	450
Pro	Ser	Pro	Thr	Pro	Val	Thr	Pro	Arg	Pro	Pro	Arg	Ser	Leu	Thr		455	460	465
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu		470	475	480
Gln	Arg	Tyr	Leu	Gln	Gly	Ser	Ser	Val	Gln	Leu	Arg	Ser	Leu	Arg		485	490	495
Leu	Thr	Tyr	Arg	Asn	Leu	Ser	Gly	Pro	Asp	Lys	Arg	Leu	Val	Thr		500	505	510
Leu	Arg	Leu	Pro	Ala	Ser	Leu	Ala	Glu	Tyr	Thr	Val	Thr	Gln	Leu		515	520	525
Arg	Pro	Asn	Ala	Thr	Tyr	Ser	Val	Cys	Val	Met	Pro	Leu	Gly	Pro		530	535	540
Gly	Arg	Val	Pro	Glu	Gly	Glu	Glu	Ala	Cys	Gly	Glu	Ala	His	Thr		545	550	555
Pro	Pro	Ala	Val	His	Ser	Asn	His	Ala	Pro	Val	Thr	Gln	Ala	Arg		560	565	570
Glu	Gly	Asn	Leu	Pro	Leu	Leu	Ile	Ala	Pro	Ala	Leu	Ala	Ala	Val		575	580	585
Leu	Leu	Ala	Ala	Leu	Ala	Ala	Val	Gly	Ala	Ala	Tyr	Cys	Val	Arg		590	595	600
Arg	Gly	Arg	Ala	Met	Ala	Ala	Ala	Ala	Gln	Asp	Lys	Gly	Gln	Val		605	610	615

Gly	Pro	Gly	Ala	Gly	Pro	Leu	Glu	Leu	Glu	Gly	Val	Lys	Val	Pro
				620					625					630
Leu	Glu	Pro	Gly	Pro	Lys	Ala	Thr	Glu	Gly	Gly	Gly	Glu	Ala	Leu
				635					640					645
Pro	Ser	Gly	Ser	Glu	Cys	Glu	Val	Pro	Leu	Met	Gly	Phe	Pro	Gly
				650					655					660
Pro	Gly	Leu	Gln	Ser	Pro	Leu	His	Ala	Lys	Pro	Tyr	Ile		
				665					670					

<210> 17  
 <211> 1672  
 <212> DNA  
 <213> Homo Sapien

<400> 17  
 gcagcggcga ggcggcggtg gtggctgagt ccgtggtggc agaggcgaag 50  
 gcgacagctc atgcgggtcc ggatagggct gacgctgctg ctgtgtgcgg 100  
 tgctgctgag cttggcctcg gcgtcctcgg atgaagaagg cagccaggat 150  
 gaatccttag attccaagac tactttgaca tcagatgagt cagtaaagga 200  
 ccatactact gcaggcagag tagttgctgg tcaaataattt cttgattcag 250  
 aagaatctga attagaatcc tctattcaag aagaggaaga cagcctcaag 300  
 agccaagagg gggaaagtgt cacagaagat atcagctttc tagagtctcc 350  
 aaatccagaa aacaaggact atgaagagcc aaagaaagta cggaaaccag 400  
 ctttgaccgc cattgaaggc acagcacatg gggagccctg ccacttcct 450  
 tttcttttcc tagataagga gtatgatgaa tgtacatcag atgggaggga 500  
 agatggcaga ctgtggtgtg ctacaaccta tgactacaaa gcagatgaaa 550  
 agtggggctt ttgtgaaact gaagaagagg ctgctaagag acggcagatg 600  
 caggaagcag aaatgatgta tcaaactgga atgaaaatcc ttaatggaag 650  
 caataagaaa agccaaaaaa gagaagcata tcggtatctc caaaaggcag 700  
 caagcatgaa ccataccaaa gccctggaga gagtgtcata tgctctttta 750  
 tttggtgatt acttgccaca gaatatccag gcagcgagag agatgtttga 800  
 gaagctgact gaggaaggct ctcccaaggg acagactgct cttggctttc 850  
 tgtatgcctc tggacttggg gttaattcaa gtcaggcaaa ggctcttgta 900  
 tattatacat ttggagctct tgggggcaat ctaatagccc acatggtttt 950  
 ggtaagtaga ctttagtgga aggctaataa tattaacatc agaagaattt 1000

gtggtttata ggggccacaa ctttttcagc tttcatgac cagatttgct 1050  
 tgtattaaga ccaaatttc agttgaactt cttcaaatt cttgttaatg 1100  
 gatataacac atggaatcta catgtaaatg aaagttagtg gagtccacaa 1150  
 tttttcttta aaatgattag tttggctgat tgcccctaaa aagagagatc 1200  
 tgataaatgg ctctttttta attttctctg agttggaatt gtcagaatca 1250  
 ttttttacat tagattatca taattttaaa aatttttctt tagtttttca 1300  
 aaattttgta aatggtaggt atagaaaaac aacatgaaat attatacaat 1350  
 attttgcaac aatgccctaa gaattgttaa aattcatgga gttatttggtg 1400  
 cagaatgact ccagagagct ctactttctg ttttttactt ttcattgattg 1450  
 gctgtcttcc catttattct ggtcatttat tgctagtac actgtgcctg 1500  
 cttccagtag tctcattttc cctattttgc taatttgta ctttttcttt 1550  
 gctaatttg aagattaact catttttaat aaaattatgt ctaagattaa 1600  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaaaaaaaaa aaaaaaaaaa aa 1672

<210> 18  
 <211> 301  
 <212> PRT  
 <213> Homo Sapien

<400> 18  
 Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu  
 1 5 10 15  
 Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp  
 20 25 30  
 Glu Ser Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val  
 35 40 45  
 Lys Asp His Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe  
 50 55 60  
 Leu Asp Ser Glu Glu Ser Glu Leu Glu Ser Ser Ile Gln Glu Glu  
 65 70 75  
 Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser Val Thr Glu Asp  
 80 85 90  
 Ile Ser Phe Leu Glu Ser Pro Asn Pro Glu Asn Lys Asp Tyr Glu  
 95 100 105  
 Glu Pro Lys Lys Val Arg Lys Pro Ala Leu Thr Ala Ile Glu Gly  
 110 115 120

Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	
				125					130					135	
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	
				140					145					150	
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	
				155					160					165	
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	
				170					175					180	
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	
				185					190					195	
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	
				200					205					210	
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	
				215					220					225	
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	
				230					235					240	
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	
				245					250					255	
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	
				260					265					270	
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	
				275					280					285	
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	
				290					295					300	

Leu

<210> 19  
 <211> 1508  
 <212> DNA  
 <213> Homo Sapien

<400> 19  
 aattcagatt ttaagcccat tctgcagtgg aatttcatga actagcaaga 50  
 ggacaccatc ttcttgtatt atacaagaaa ggagtgtacc tatcacacac 100  
 agggggaaaa atgctctttt gggtgctagg cctcctaata ctctgtgggt 150  
 ttctgtggac tcgtaaagga aaactaaaga ttgaagacat cactgataag 200  
 tacattttta tcaactggatg tgactcgggc tttggaaact tggcagccag 250  
 aacttttgat aaaaagggat ttcatgtaat cgctgcctgt ctgactgaat 300

caggatcaac agctttaag gcagaaacct cagagagact tcgtactgtg 350  
cttctggatg tgaccgaccc agagaatgtc aagaggactg cccagtgggt 400  
gaagaaccaa gttggggaga aaggtctctg gggctctgatc aataatgctg 450  
gtgttcccg cgtgctggct cccactgact ggctgacact agaggactac 500  
agagaaccta ttgaagtga cctgtttgga ctcactcagt tgacactaaa 550  
tatgcttctt ttggtcaaga aagctcaagg gagagttatt aatgtctcca 600  
gtgttggagg tcgccttgca atcgttggag ggggctatac tccatccaaa 650  
tatgcagtgg aaggtttcaa tgacagctta agacgggaca tgaaagcttt 700  
tggtgtgcac gtctcatgca ttgaaccagg attgttcaaa acaaacttgg 750  
cagatccagt aaaggtaatt gaaaaaaaaac tcgccatttg ggagcagctg 800  
tctccagaca tcaaacaaca atatggagaa gggttacattg aaaaaagtct 850  
agacaaactg aaaggcaata aatcctatgt gaacatggac ctctctccgg 900  
tggtagagtg catggaccac gctctaacaa gtctcttccc taagactcat 950  
tatgccgctg gaaaagatgc caaaattttc tggatacctc tgtctcacat 1000  
gccagcagct ttgcaagact ttttattggt gaaacagaaa gcagagctgg 1050  
ctaattccaa ggcagtgtga ctacagtaac cacaaatgtc tcctccaggc 1100  
tatgaaattg gccgatttca agaacacatc tccttttcaa cccatttctt 1150  
tatctgctcc aacctggact catttagatc gtgcttattt ggattgcaaa 1200  
agggagtccc accatcgtg gtggtatccc agggtccttg ctcaagtttt 1250  
ctttgaaaag gagggctgga atggtacatc acataggcaa gtcttgcctt 1300  
gtatttaggc tttgcctgct tgggtgtgat taagggaat tgaaagactt 1350  
gcccattcaa aatgatcttt accgtggcct gcccctatgct tatgggtccc 1400  
agcatttaca gtaacttgtg aatgttaagt atcatctctt atctaaatat 1450  
taaaagataa gtcaacccaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500  
aaaaaaaa 1508

<210> 20

<211> 319

<212> PRT

<213> Homo Sapien

<400> 20

Met Leu Phe Trp Val Leu Gly Leu Leu Ile Leu Cys Gly Phe Leu

1	5	10	15
Trp Thr Arg Lys Gly Lys Leu Lys Ile Glu Asp Ile Thr Asp Lys	20	25	30
Tyr Ile Phe Ile Thr Gly Cys Asp Ser Gly Phe Gly Asn Leu Ala	35	40	45
Ala Arg Thr Phe Asp Lys Lys Gly Phe His Val Ile Ala Ala Cys	50	55	60
Leu Thr Glu Ser Gly Ser Thr Ala Leu Lys Ala Glu Thr Ser Glu	65	70	75
Arg Leu Arg Thr Val Leu Leu Asp Val Thr Asp Pro Glu Asn Val	80	85	90
Lys Arg Thr Ala Gln Trp Val Lys Asn Gln Val Gly Glu Lys Gly	95	100	105
Leu Trp Gly Leu Ile Asn Asn Ala Gly Val Pro Gly Val Leu Ala	110	115	120
Pro Thr Asp Trp Leu Thr Leu Glu Asp Tyr Arg Glu Pro Ile Glu	125	130	135
Val Asn Leu Phe Gly Leu Ile Ser Val Thr Leu Asn Met Leu Pro	140	145	150
Leu Val Lys Lys Ala Gln Gly Arg Val Ile Asn Val Ser Ser Val	155	160	165
Gly Gly Arg Leu Ala Ile Val Gly Gly Gly Tyr Thr Pro Ser Lys	170	175	180
Tyr Ala Val Glu Gly Phe Asn Asp Ser Leu Arg Arg Asp Met Lys	185	190	195
Ala Phe Gly Val His Val Ser Cys Ile Glu Pro Gly Leu Phe Lys	200	205	210
Thr Asn Leu Ala Asp Pro Val Lys Val Ile Glu Lys Lys Leu Ala	215	220	225
Ile Trp Glu Gln Leu Ser Pro Asp Ile Lys Gln Gln Tyr Gly Glu	230	235	240
Gly Tyr Ile Glu Lys Ser Leu Asp Lys Leu Lys Gly Asn Lys Ser	245	250	255
Tyr Val Asn Met Asp Leu Ser Pro Val Val Glu Cys Met Asp His	260	265	270
Ala Leu Thr Ser Leu Phe Pro Lys Thr His Tyr Ala Ala Gly Lys	275	280	285
Asp Ala Lys Ile Phe Trp Ile Pro Leu Ser His Met Pro Ala Ala			



	290		295		300
Leu Gln Asp Phe	Leu Leu Leu Lys Gln Lys Ala Glu Leu Ala Asn				
	305		310		315

Pro Lys Ala Val

<210> 21  
 <211> 1849  
 <212> DNA  
 <213> Homo Sapien

<400> 21  
 ctgaggcggc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50  
 gctttgtgct cggcgccactc gctttccagc acctcaacac ggactcggac 100  
 acggaagggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150  
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200  
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250  
 gaagtaaata agcaagcact gaagaaaata ttatcaaata tcaaaaagaa 300  
 tgtggtagggt tggtaaaaat tccgtcgtca ttcagatcag atcatgacgt 350  
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400  
 gaccttggtt ttctgctatt aacaccaagt ataataacag aaagctgctc 450  
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggactttttc 500  
 acaggggtacc tttagtgggt gccaatctgg gcatgtctga acaactgggt 550  
 tataaaactg tatcagggtc ctgtatgtcc actgggtttta gccgagcagt 600  
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650  
 tacataagat aatgaaatg tatgcttcat tacaagagga attaaagagt 700  
 atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750  
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800  
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850  
 tttctttgtc aggcattacg gacctttttt ccaaattctg aatttcttca 900  
 ttcattgtgt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950  
 actacaacca ccatctcgat gtagtagaca atctgacctt aatggtagaa 1000  
 cacactgaca ttcttgaagc tagtcagct agtacaccac aaatcattaa 1050  
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggc 1100

tgtagatatac acaagacaaa cgatctaaag caaataactgg tagtagtaac 1150  
 caagataaaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200  
 aaagatgaag ggttttggtg aatattcacg gtctcctaca ttttgatcct 1250  
 ttttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300  
 atttctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350  
 tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400  
 ttacttcaca aagtactttt tcaaacaatca gatgctttta tttccaaacc 1450  
 tttttttcac ctttcactaa gttgttgagg ggaaggctta cacagacaca 1500  
 ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550  
 tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600  
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650  
 atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700  
 tgaaaattta tctgagtcac taaaattctc ctttaagtga acttttttag 1750  
 aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800  
 aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 22  
 <211> 409  
 <212> PRT  
 <213> Homo Sapien

<400> 22  
 Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu  
 1 5 10 15  
 Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu  
 20 25 30  
 Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile  
 35 40 45  
 Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp  
 50 55 60  
 Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn  
 65 70 75  
 Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser  
 80 85 90  
 Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His  
 95 100 105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	

Asp Glu Glu Ile Glu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg  
395 400 405

Ser Pro Thr Phe

<210> 23  
<211> 2651  
<212> DNA  
<213> Homo Sapien

<400> 23  
ggcacagccg cgcggcggag ggcagagtca gccgagccga gtccagccgg 50  
acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100  
cgccgcccac accctctgcg gtccccgcgg cgctgccac cttccctcc 150  
ttccccgcgt cccgcctcg cgggccagtc agcttgccgg gttcgctgcc 200  
ccgcgaaacc ccgaggtcac cagccgcgc ctctgcttcc ctgggcccgc 250  
cgccgcctcc acgcctcct tctccctgg cccgggcct ggcaccggg 300  
accgttgctt gacgcgaggc ccagctctac ttttcgcccc gcgtctctc 350  
cgctgctcg cctcttccac caactccaac tccttctccc tccagctcca 400  
ctcgctagtc cccgactccg ccagccctcg gccgctgcc gtagcgccgc 450  
ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg cccgcacat 500  
ggcacgggtc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550  
ccgcgctgct ggctgccgag ctcaagtcga aaagttgctc ggaagtgcga 600  
cgtctttacg tgtccaaagg cttcaacaag aacgatgcc cctccacga 650  
gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700  
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaa 750  
agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800  
ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850  
aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900  
aattctgagc tatttaaaga tctcttcgta gagttgaaac gttactacgt 950  
gggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000  
tcctggagcg gatgttcgc ctggtgaact ccagtacca ctttacagat 1050  
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100  
agatgtccct cgcaaattga agctccagg tactcgtgct tttgtagcag 1150

cccgactttt cgctcaaggc ttagcgggttg cgggagatgt cgtgagcaag 1200  
gtctccgtgg taaaccccac agcccagtgt acccatgccc tgttgaagat 1250  
gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300  
actactgctc aaacatcatg agaggctggt tggccaacca aggggatctc 1350  
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400  
gctagagggg cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450  
agattttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500  
cagaagggtt tccagggatg tggaccccc aagcccctcc cagctggacg 1550  
aattttctcgt tccatctctg aaagtgcctt cagtgcctgc ttcagaccac 1600  
atccccga ggaacgccca accacagcag ctggcactag tttggaccga 1650  
ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctgggc 1700  
ctcccttccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750  
gcaatgagga tgactggttg aatgggaaag gcaaaagcag gtacctgttt 1800  
gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850  
ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900  
ttcagatgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950  
gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000  
ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050  
atgctgggaa gagtgccaat gagaaagccg acagtgcctg tgtccgtcct 2100  
ggggcacagg cctacctcct cactgtcttc tgcattctgt tcttggttat 2150  
gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200  
aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250  
tttttaaagt aatggacaac aatgtacagt ttttactatg tggccactgg 2300  
tttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350  
actgtgcatt gagttggttc ctgctcccc aaacatggtt aaacgtggct 2400  
aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450  
ctctattatt tgtttgtatg ttttttctc atttcgtttg tgggtttttt 2500  
tttccaaactg tgatctcgcc ttgtttctta caagcaaacc agggtcctt 2550  
cttggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600

agcagggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650

c 2651

<210> 24

<211> 556

<212> PRT

<213> Homo Sapien

<400> 24

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
1				5					10					15

Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30

Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn
			35						40					45

Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys
				50					55					60

Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr
				65					70					75

Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln
				80					85					90

Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe
				95					100					105

Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu
				110					115					120

Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn
				125					130					135

Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr
				140					145					150

Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp
				155					160					165

Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr
				170					175					180

His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu
				185					190					195

Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln
				200					205					210

Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu
				215					220					225

Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

				230					235					240
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser
				245					250					255
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys
				260					265					270
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp
				275					280					285
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu
				290					295					300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile
				305					310					315
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser
				320					325					330
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys
				335					340					345
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala
				350					355					360
Phe	Ser	Ala	Arg	Phe	Arg	Pro	His	His	Pro	Glu	Glu	Arg	Pro	Thr
				365					370					375
Thr	Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Val	Lys
				380					385					390
Glu	Lys	Leu	Lys	Gln	Ala	Lys	Lys	Phe	Trp	Ser	Ser	Leu	Pro	Ser
				395					400					405
Asn	Val	Cys	Asn	Asp	Glu	Arg	Met	Ala	Ala	Gly	Asn	Gly	Asn	Glu
				410					415					420
Asp	Asp	Cys	Trp	Asn	Gly	Lys	Gly	Lys	Ser	Arg	Tyr	Leu	Phe	Ala
				425					430					435
Val	Thr	Gly	Asn	Gly	Leu	Ala	Asn	Gln	Gly	Asn	Asn	Pro	Glu	Val
				440					445					450
Gln	Val	Asp	Thr	Ser	Lys	Pro	Asp	Ile	Leu	Ile	Leu	Arg	Gln	Ile
				455					460					465
Met	Ala	Leu	Arg	Val	Met	Thr	Ser	Lys	Met	Lys	Asn	Ala	Tyr	Asn
				470					475					480
Gly	Asn	Asp	Val	Asp	Phe	Phe	Asp	Ile	Ser	Asp	Glu	Ser	Ser	Gly
				485					490					495
Glu	Gly	Ser	Gly	Ser	Gly	Cys	Glu	Tyr	Gln	Gln	Cys	Pro	Ser	Glu
				500					505					510
Phe	Asp	Tyr	Asn	Ala	Thr	Asp	His	Ala	Gly	Lys	Ser	Ala	Asn	Glu





<400> 26

Met	Lys	Val	Leu	Ile	Ser	Ser	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Met
1				5					10					15
Leu	Met	Ser	Met	Val	Ser	Ser	Ser	Leu	Asn	Pro	Gly	Val	Ala	Arg
				20					25					30
Gly	His	Arg	Asp	Arg	Gly	Gln	Ala	Ser	Arg	Arg	Trp	Leu	Gln	Glu
				35					40					45
Gly	Gly	Gln	Glu	Cys	Glu	Cys	Lys	Asp	Trp	Phe	Leu	Arg	Ala	Pro
				50					55					60
Arg	Arg	Lys	Phe	Met	Thr	Val	Ser	Gly	Leu	Pro	Lys	Lys	Gln	Cys
				65					70					75
Pro	Cys	Asp	His	Phe	Lys	Gly	Asn	Val	Lys	Lys	Thr	Arg	His	Gln
				80					85					90
Arg	His	His	Arg	Lys	Pro	Asn	Lys	His	Ser	Arg	Ala	Cys	Gln	Gln
				95					100					105
Phe	Leu	Lys	Gln	Cys	Gln	Leu	Arg	Ser	Phe	Ala	Leu	Pro	Leu	
				110					115					

<210> 27

<211> 1371

<212> DNA

<213> Homo Sapien

<400> 27

ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50

ggaagcacag ctgagagctg gtctgccatg gacatcctgg tcccactcct 100

gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150

tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200

gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250

cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300

tggagctggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350

tgcaggggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400

aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450

ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500

gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550

ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600

atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650

gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700

ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750  
 agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800  
 gctgtcaaac aatctttccc aagctccaag gcactcattt gtccttccc 850  
 cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900  
 gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950  
 ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgccttc 1000  
 gacagtgaaa aagctctact tctacgctga cccagggagg aaacactagg 1050  
 accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100  
 gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gtcctctcg 1150  
 ctttctctct gaggctacac ccatgcgtct ctaggaactg gtcacaaaag 1200  
 tcatggtgcc tgcattccctg ccaagcccc ctgacctct ctccccacta 1250  
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300  
 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350  
 taataaatag acgaaaccac g 1371

<210> 28

<211> 277

<212> PRT

<213> Homo Sapien

<400> 28

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu
1				5				10						15
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro
				20				25						30
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro
				35				40						45
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser
				50				55						60
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu
				65				70						75
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro
				80				85						90
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys
				95				100						105
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu

	110	115	120
Arg Phe Val Val	Ala Pro Gly Glu Asp	Met Arg Gln Leu Ala	Asp
	125	130	135
Gly Ser Met Asp	Val Val Val Cys Thr	Leu Val Leu Cys Ser	Val
	140	145	150
Gln Ser Pro Arg	Lys Val Leu Gln Glu	Val Arg Arg Val Leu	Arg
	155	160	165
Pro Gly Gly Val	Leu Phe Phe Trp Glu	His Val Ala Glu Pro	Tyr
	170	175	180
Gly Ser Trp Ala	Phe Met Trp Gln Gln	Val Phe Glu Pro Thr	Trp
	185	190	195
Lys His Ile Gly	Asp Gly Cys Cys Leu	Thr Arg Glu Thr Trp	Lys
	200	205	210
Asp Leu Glu Asn	Ala Gln Phe Ser Glu	Ile Gln Met Glu Arg	Gln
	215	220	225
Pro Pro Pro Leu	Lys Trp Leu Pro Val	Gly Pro His Ile Met	Gly
	230	235	240
Lys Ala Val Lys	Gln Ser Phe Pro Ser	Ser Lys Ala Leu Ile	Cys
	245	250	255
Ser Phe Pro Ser	Leu Gln Leu Glu Gln	Ala Thr His Gln Pro	Ile
	260	265	270
Tyr Leu Pro Leu	Arg Gly Thr		
	275		

<210> 29  
 <211> 494  
 <212> DNA  
 <213> Homo Sapien

<400> 29  
 caatgtttgc ctatccacct cccccaagcc cctttaccta tgctgctgct 50  
 aacgctgctg ctgctgctgc tgctgcttaa aggctcatgc ttggagtggg 100  
 gactggtcgg tgcccagaaa gtctcttctg ccactgacgc ccccatcagg 150  
 gattgggcct tctttccccc ttcctttctg tgtctcctgc ctcatcggcc 200  
 tgccatgacc tgcagccaag ccagcccccg tggggaaggg gagaaagtgg 250  
 gggatggcta agaaagctgg gagatagga acagaagagg gtagtgggtg 300  
 ggctaggggg gctgccttat ttaaagtggg tgtttatgat tcttatacta 350  
 atttatacaa agatattaag gccctgttca ttaagaaatt gttcccttcc 400

cctgtgttca atgtttgtaa agattgttct gtgtaaatat gtctttataa 450

taaacagtta aaagctgaaa aaaaaaaaaa aaaaaaaaaa aaaa 494

<210> 30  
<211> 73  
<212> PRT  
<213> Homo Sapien

<400> 30  
Met Leu Leu Leu Thr Leu Leu Leu Leu Leu Leu Leu Lys Gly  
1 5 10 15  
Ser Cys Leu Glu Trp Gly Leu Val Gly Ala Gln Lys Val Ser Ser  
20 25 30  
Ala Thr Asp Ala Pro Ile Arg Asp Trp Ala Phe Phe Pro Pro Ser  
35 40 45  
Phe Leu Cys Leu Leu Pro His Arg Pro Ala Met Thr Cys Ser Gln  
50 55 60  
Ala Gln Pro Arg Gly Glu Gly Glu Lys Val Gly Asp Gly  
65 70

<210> 31  
<211> 1660  
<212> DNA  
<213> Homo Sapien

<400> 31  
gtttgaattc cttcaactat acccacagtc caaaagcaga ctcaactgtgt 50  
cccaggctac cagttcctcc aagcaagtca tttcccttat ttaaccgatg 100  
tgtccctcaa acacctgagt gctactccct atttgcatct gttttgataa 150  
atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200  
gatacaatcc ttggcctgtg taccctcgca ttagccttgt ctttggccat 250  
gatgtttacc ttcagattca tcaccaccct tctggttcac attttcattt 300  
cattgggttat tttgggattg ttgtttgtct gcggtgtttt atggtggctg 350  
tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400  
aaatatgaag tgcgtgctgg ggtttgctat cgtatccaca ggcacacagg 450  
cagtgtgct cgtcttgatt tttgttctca gaaagagaat aaaattgaca 500  
gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttcct 550  
gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600  
tctgggtggc tgtgctgctg agcctgggaa ctgcaggagc tgcccagggt 650  
atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700

gtggtcgtag catttaattg gcctcatctg gactagtga ttcataccttg 750  
 cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800  
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850  
 tctcttcttc taccatcaag gaaccgttgt gaaaggggtca tttttaatct 900  
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950  
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgctgcta 1000  
 ctgctgtttc tgggtgtcttg acaaatacct gctccatctc aaccagaatg 1050  
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100  
 gatgcattca aaatcttgtc caagaactca agtcacttta catctattaa 1150  
 ctgctttgga gacttcataa tttttctagg aaaggtgtta gtggtgtgtt 1200  
 tcaactgtttt tggaggactc atggctttta actacaatcg ggcattccag 1250  
 gtgtgggcag tccctctgtt attggtagct tttttgcct acttagtagc 1300  
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350  
 gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400  
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaattaaa 1450  
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggagggaa 1500  
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550  
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600  
 tagagaaaag ttagtgaatt tttttttaa agacctaata aaccctattc 1650  
 ttctctcaaaa 1660

<210> 32  
 <211> 445  
 <212> PRT  
 <213> Homo Sapien

<400> 32  
 Met Ser Gly Arg Asp Thr Ile Leu Gly Leu Cys Ile Leu Ala Leu  
 1 5 10 15  
 Ala Leu Ser Leu Ala Met Met Phe Thr Phe Arg Phe Ile Thr Thr  
 20 25 30  
 Leu Leu Val His Ile Phe Ile Ser Leu Val Ile Leu Gly Leu Leu  
 35 40 45  
 Phe Val Cys Gly Val Leu Trp Trp Leu Tyr Tyr Asp Tyr Thr Asn  
 50 55 60

Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys	
				65					70					75	
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu	
				80					85					90	
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val	
				95					100					105	
Glu	Leu	Phe	Gln	Ile	Thr	Asn	Lys	Ala	Ile	Ser	Ser	Ala	Pro	Phe	
				110					115					120	
Leu	Leu	Phe	Gln	Pro	Leu	Trp	Thr	Phe	Ala	Ile	Leu	Ile	Phe	Phe	
				125					130					135	
Trp	Val	Leu	Trp	Val	Ala	Val	Leu	Leu	Ser	Leu	Gly	Thr	Ala	Gly	
				140					145					150	
Ala	Ala	Gln	Val	Met	Glu	Gly	Gly	Gln	Val	Glu	Tyr	Lys	Pro	Leu	
				155					160					165	
Ser	Gly	Ile	Arg	Tyr	Met	Trp	Ser	Tyr	His	Leu	Ile	Gly	Leu	Ile	
				170					175					180	
Trp	Thr	Ser	Glu	Phe	Ile	Leu	Ala	Cys	Gln	Gln	Met	Thr	Ile	Ala	
				185					190					195	
Gly	Ala	Val	Val	Thr	Cys	Tyr	Phe	Asn	Arg	Ser	Lys	Asn	Asp	Pro	
				200					205					210	
Pro	Asp	His	Pro	Ile	Leu	Ser	Ser	Leu	Ser	Ile	Leu	Phe	Phe	Tyr	
				215					220					225	
His	Gln	Gly	Thr	Val	Val	Lys	Gly	Ser	Phe	Leu	Ile	Ser	Val	Val	
				230					235					240	
Arg	Ile	Pro	Arg	Ile	Ile	Val	Met	Tyr	Met	Gln	Asn	Ala	Leu	Lys	
				245					250					255	
Glu	Gln	Gln	His	Gly	Ala	Leu	Ser	Arg	Tyr	Leu	Phe	Arg	Cys	Cys	
				260					265					270	
Tyr	Cys	Cys	Phe	Trp	Cys	Leu	Asp	Lys	Tyr	Leu	Leu	His	Leu	Asn	
				275					280					285	
Gln	Asn	Ala	Tyr	Thr	Thr	Thr	Ala	Ile	Asn	Gly	Thr	Asp	Phe	Cys	
				290					295					300	
Thr	Ser	Ala	Lys	Asp	Ala	Phe	Lys	Ile	Leu	Ser	Lys	Asn	Ser	Ser	
				305					310					315	
His	Phe	Thr	Ser	Ile	Asn	Cys	Phe	Gly	Asp	Phe	Ile	Ile	Phe	Leu	
				320					325					330	
Gly	Lys	Val	Leu	Val	Val	Cys	Phe	Thr	Val	Phe	Gly	Gly	Leu	Met	
				335					340					345	

Ala	Phe	Asn	Tyr	Asn	Arg	Ala	Phe	Gln	Val	Trp	Ala	Val	Pro	Leu	
				350					355					360	
Leu	Leu	Val	Ala	Phe	Phe	Ala	Tyr	Leu	Val	Ala	His	Ser	Phe	Leu	
				365					370					375	
Ser	Val	Phe	Glu	Thr	Val	Leu	Asp	Ala	Leu	Phe	Leu	Cys	Phe	Ala	
				380					385					390	
Val	Asp	Leu	Glu	Thr	Asn	Asp	Gly	Ser	Ser	Glu	Lys	Pro	Tyr	Phe	
				395					400					405	
Met	Asp	Gln	Glu	Phe	Leu	Ser	Phe	Val	Lys	Arg	Ser	Asn	Lys	Leu	
				410					415					420	
Asn	Asn	Ala	Arg	Ala	Gln	Gln	Asp	Lys	His	Ser	Leu	Arg	Asn	Glu	
				425					430					435	
Glu	Gly	Thr	Glu	Leu	Gln	Ala	Ile	Val	Arg						
				440					445						

<210> 33  
 <211> 2773  
 <212> DNA  
 <213> Homo Sapien

<400> 33  
 gttcgattag ctctcttgag aagaagagaa aaggttcttg gacctctccc 50  
 tgtttcttcc ttagaataat ttgtatggga tttgtgatgc aggaaagcct 100  
 aagggaataa gaataattcat tctgtgtggt gaaaattttt tgaaaaaaaa 150  
 attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgttg 200  
 ttctcactat gaaggcatct gttattgaaa tgttccttgt tttgctggtg 250  
 actggagtac attcaaacaa agaaacggca aagaagatta aaaggcccaa 300  
 gttcactgtg cctcagatca actgcatgtt caaagccgga aagatcatcg 350  
 atcctgagtt cattgtgaaa tgtccagcag gatgccaaga ccccaaatac 400  
 catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450  
 tgccgtacac agtgggtgtgc ttgataattc aggagggaaa atacttggtc 500  
 ggaagggtgc tggacagtct gggtacaaag ggagttattc caacggtgtc 550  
 caatcggtat ccctaccacg atggagagaa tcctttatcg tcttagaaag 600  
 taaacccaaa aagggtgtaa cctaccatc agctcttaca tactcatcat 650  
 cgaaaagtcc agctgcccaa gcaggtgaga ccacaaaagc ctatcagagg 700  
 ccacctattc cagggaacaac tgcacagccg gtcactctga tgcagcttct 750  
 ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800

cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggccac 850  
aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900  
aaacaggccc agagctgata caggtatcca aaggcaagat ccttcaggag 950  
ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000  
aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050  
aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100  
gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgcccaa 1150  
gctcttgaca ttggccctgc cgggccactg atgggtgttg tccagtatgg 1200  
agacaacctt gctactcact ttaacctcaa gacacacacg aattctcgag 1250  
atctgaagac agccatagag aaaattactc agagaggagg acttttctaat 1300  
gtaggtcggg ccatctcctt tgtgaccaag aacttctttt ccaaagccaa 1350  
tggaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400  
ggcccacgga caaagtggag gaggcttcaa gacttgcgag agagtcagga 1450  
atcaacattt tcttcacac cattgaaggt gctgctgaaa atgagaagca 1500  
gtatgtggtg gagcccaact ttgcaaaca ggcgtgtgc agaacaacg 1550  
gcttctactc gctccacgtg cagagctggt ttggcctcca caagacctg 1600  
cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650  
gacctgcttg aactcggtg acattggctt cgtcatcgac ggctccagca 1700  
gtgtggggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750  
accaaagagt ttgagatttc cgacacggac acgcgcatcg gggccgtgca 1800  
gtacacctac gaacagcggc tggagtttgg gttcgacaag tacagcagca 1850  
agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgggtggc 1900  
accagcacgg gggctgcat caacttcgcc ctggagcagc tcttcaagaa 1950  
gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000  
cctacgacga cgtccggatc ccagccatgg ctgccatct gaaggagtg 2050  
atcacctatg cgataggcgt tgctgggct gcccaagagg agctagaagt 2100  
cattgccact caccgccca gagaccactc cttctttgtg gacgagtttg 2150  
acaacctcca tcagtatgtc cccaggatca tccagaacat ttgtacagag 2200



ttcaactcac agcctcggaa ctgaattcag agcaggcaga gcaccagcaa 2250  
 gtgctgcttt actaactgac gtgttgacc accccaccgc ttaatggggc 2300  
 acgcacggtg catcaagtct tgggcagggc atggagaaac aaatgtcttg 2350  
 ttattattct ttgccatcat gctttttcat attccaaaac ttggagttac 2400  
 aaagatgata acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450  
 gggtgctgga gattttacat ttgacaatt gttttcaaaa taaatgttcg 2500  
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550  
 ttttaagttgt tattttctgat ttgaactctg taaccctcag caagtttcat 2600  
 ttttgtcatg acaatgtagg aattgctgaa ttaaagtgtt agaaggatga 2650  
 aaaataaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750  
 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 34  
 <211> 678  
 <212> PRT  
 <213> Homo Sapien

<400> 34  
 Met Arg Thr Val Val Leu Thr Met Lys Ala Ser Val Ile Glu Met  
 1 5 10 15  
 Phe Leu Val Leu Leu Val Thr Gly Val His Ser Asn Lys Glu Thr  
 20 25 30  
 Ala Lys Lys Ile Lys Arg Pro Lys Phe Thr Val Pro Gln Ile Asn  
 35 40 45  
 Cys Asp Val Lys Ala Gly Lys Ile Ile Asp Pro Glu Phe Ile Val  
 50 55 60  
 Lys Cys Pro Ala Gly Cys Gln Asp Pro Lys Tyr His Val Tyr Gly  
 65 70 75  
 Thr Asp Val Tyr Ala Ser Tyr Ser Ser Val Cys Gly Ala Ala Val  
 80 85 90  
 His Ser Gly Val Leu Asp Asn Ser Gly Gly Lys Ile Leu Val Arg  
 95 100 105  
 Lys Val Ala Gly Gln Ser Gly Tyr Lys Gly Ser Tyr Ser Asn Gly  
 110 115 120  
 Val Gln Ser Leu Ser Leu Pro Arg Trp Arg Glu Ser Phe Ile Val  
 125 130 135

Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu	
				140					145					150	
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr	
				155					160					165	
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln	
				170					175					180	
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala	
				185					190					195	
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr	
				200					205					210	
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu	
				215					220					225	
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg	
				230					235					240	
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala	
				245					250					255	
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val	
				260					265					270	
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu	
				275					280					285	
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly	
				290					295					300	
Ser	Thr	Ser	Ile	Gly	Lys	Arg	Arg	Phe	Arg	Ile	Gln	Lys	Gln	Leu	
				305					310					315	
Leu	Ala	Asp	Val	Ala	Gln	Ala	Leu	Asp	Ile	Gly	Pro	Ala	Gly	Pro	
				320					325					330	
Leu	Met	Gly	Val	Val	Gln	Tyr	Gly	Asp	Asn	Pro	Ala	Thr	His	Phe	
				335					340					345	
Asn	Leu	Lys	Thr	His	Thr	Asn	Ser	Arg	Asp	Leu	Lys	Thr	Ala	Ile	
				350					355					360	
Glu	Lys	Ile	Thr	Gln	Arg	Gly	Gly	Leu	Ser	Asn	Val	Gly	Arg	Ala	
				365					370					375	
Ile	Ser	Phe	Val	Thr	Lys	Asn	Phe	Phe	Ser	Lys	Ala	Asn	Gly	Asn	
				380					385					390	
Arg	Ser	Gly	Ala	Pro	Asn	Val	Val	Val	Val	Met	Val	Asp	Gly	Trp	
				395					400					405	
Pro	Thr	Asp	Lys	Val	Glu	Glu	Ala	Ser	Arg	Leu	Ala	Arg	Glu	Ser	
				410					415					420	

Gly	Ile	Asn	Ile	Phe	Phe	Ile	Thr	Ile	Glu	Gly	Ala	Ala	Glu	Asn	
				425					430					435	
Glu	Lys	Gln	Tyr	Val	Val	Glu	Pro	Asn	Phe	Ala	Asn	Lys	Ala	Val	
				440					445					450	
Cys	Arg	Thr	Asn	Gly	Phe	Tyr	Ser	Leu	His	Val	Gln	Ser	Trp	Phe	
				455					460					465	
Gly	Leu	His	Lys	Thr	Leu	Gln	Pro	Leu	Val	Lys	Arg	Val	Cys	Asp	
				470					475					480	
Thr	Asp	Arg	Leu	Ala	Cys	Ser	Lys	Thr	Cys	Leu	Asn	Ser	Ala	Asp	
				485					490					495	
Ile	Gly	Phe	Val	Ile	Asp	Gly	Ser	Ser	Ser	Val	Gly	Thr	Gly	Asn	
				500					505					510	
Phe	Arg	Thr	Val	Leu	Gln	Phe	Val	Thr	Asn	Leu	Thr	Lys	Glu	Phe	
				515					520					525	
Glu	Ile	Ser	Asp	Thr	Asp	Thr	Arg	Ile	Gly	Ala	Val	Gln	Tyr	Thr	
				530					535					540	
Tyr	Glu	Gln	Arg	Leu	Glu	Phe	Gly	Phe	Asp	Lys	Tyr	Ser	Ser	Lys	
				545					550					555	
Pro	Asp	Ile	Leu	Asn	Ala	Ile	Lys	Arg	Val	Gly	Tyr	Trp	Ser	Gly	
				560					565					570	
Gly	Thr	Ser	Thr	Gly	Ala	Ala	Ile	Asn	Phe	Ala	Leu	Glu	Gln	Leu	
				575					580					585	
Phe	Lys	Lys	Ser	Lys	Pro	Asn	Lys	Arg	Lys	Leu	Met	Ile	Leu	Ile	
				590					595					600	
Thr	Asp	Gly	Arg	Ser	Tyr	Asp	Asp	Val	Arg	Ile	Pro	Ala	Met	Ala	
				605					610					615	
Ala	His	Leu	Lys	Gly	Val	Ile	Thr	Tyr	Ala	Ile	Gly	Val	Ala	Trp	
				620					625					630	
Ala	Ala	Gln	Glu	Glu	Leu	Glu	Val	Ile	Ala	Thr	His	Pro	Ala	Arg	
				635					640					645	
Asp	His	Ser	Phe	Phe	Val	Asp	Glu	Phe	Asp	Asn	Leu	His	Gln	Tyr	
				650					655					660	
Val	Pro	Arg	Ile	Ile	Gln	Asn	Ile	Cys	Thr	Glu	Phe	Asn	Ser	Gln	
				665					670					675	

Pro Arg Asn

<210> 35  
 <211> 2095  
 <212> DNA

<213> Homo Sapien

<400> 35

```
ccgagcacag gagattgcct gcgttttagga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tctttttttc tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcatct ggaattccac agttttctta 200
gctccctgga cccggttgac ctgttggctc ttcccgtgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcaactgagat ccctcaaattg gagcctcctg ctgctgtcac 400
tcctgagttt ctttgtgatg tggtagctca gccttcccc ctacaatgtg 450
atagaacgag tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttgggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tggtagacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacat 800
tatggcattc aggtgggtaa ctgagttttg cccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcataata ctggcaattt agtgaagtat 900
cttttaaacc taaaccactc agagaagttt ttcacaggtt atcctctaata 950
tgataattat tcctatagag gattttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaaggtg ttccctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggt gccaaagatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
taaaagtga cttcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcactttttg gcaggatcatg ctaaggaaca 1300
ccacatgcc ttattaactt cacattctac aaaaagccta gaaggacagg 1350
```

ataccttggtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400  
 ggaggtcagt gtgctggctt aactgaact gaaactcatg aaaaaccag 1450  
 actggagact ggagggttac acttggtgatt tattagtcag gcccttcaaa 1500  
 gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550  
 gaaattaata ggaccaaaca atttgacat gtcattctgt agactagaat 1600  
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650  
 aacaatgtag agttttatatt attgaacaat gtagtcactt gaaggttttg 1700  
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750  
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800  
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850  
 tttaaaatta cttcaacttt gtgtttttta atgttttgac gatttcaata 1900  
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950  
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000  
 cataggtcat tattgcatat cagtaatctc ttggactttg ttaaataattt 2050  
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 36  
 <211> 331  
 <212> PRT  
 <213> Homo Sapien

<400> 36  
 Met Ala Ser Ala Leu Trp Thr Val Leu Pro Ser Arg Met Ser Leu  
 1 5 10 15  
 Arg Ser Leu Lys Trp Ser Leu Leu Leu Leu Ser Leu Leu Ser Phe  
 20 25 30  
 Phe Val Met Trp Tyr Leu Ser Leu Pro His Tyr Asn Val Ile Glu  
 35 40 45  
 Arg Val Asn Trp Met Tyr Phe Tyr Glu Tyr Glu Pro Ile Tyr Arg  
 50 55 60  
 Gln Asp Phe His Phe Thr Leu Arg Glu His Ser Asn Cys Ser His  
 65 70 75  
 Gln Asn Pro Phe Leu Val Ile Leu Val Thr Ser His Pro Ser Asp  
 80 85 90  
 Val Lys Ala Arg Gln Ala Ile Arg Val Thr Trp Gly Glu Lys Lys  
 95 100 105

Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln	110	115	120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp	125	130	135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp	140	145	150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp	155	160	165
Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	170	175	180
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	185	190	195
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	200	205	210
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	215	220	225
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	230	235	240
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	245	250	255
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	260	265	270
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	275	280	285
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	290	295	300
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	305	310	315
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	320	325	330

Tyr

<210> 37

<211> 2846

<212> DNA

<213> Homo Sapien

<400> 37

cgctcggggca ccagccgcgg caaggatgga gctggggttgc tggacgcagt 50

tggggctcac ttttcttcag ctcttctca tctcgtcctt gccaaagagag 100

tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150  
tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200  
gggaagtcgt gggttatacc atcccttgct gcaggaatga ggagaatgag 250  
tgtgactcct gcctgatcca cccaggttgt accatctttg aaaactgcaa 300  
gagctgccga aatggctcat gggggggtac cttggatgac ttctatgtga 350  
aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400  
atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450  
aagctatccc ctaaagtctc actgtgaatg gaccattcat gctaaacctg 500  
ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550  
atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcatgg 600  
ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650  
gcataggatc ctcaactcac gtcctcttcc actccgatgg ctccaagaat 700  
tttgacgggt tccatgccat ttatgaggag atcacagcat gtcctcatc 750  
cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800  
agtgtgcctg cttggcaggc tatactgggc agcgtgtga aaatctcctt 850  
gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900  
aataacaggg ggccctgggc ttatcaacgg acgcatgct aaaattggca 950  
ccgtggtgtc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000  
aaaagaactt gccagcagaa tggagagtgg tcagggaac agcccatctg 1050  
cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100  
ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150  
tcagcggcct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200  
agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250  
agctccagta tgagtgcac tcacccttct accgccgcct gggcagcagc 1300  
aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350  
catccctatc tgcgggaaaa ttgagaacat cactgctcca aagaccaag 1400  
ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcggggtg 1450  
catgacggca gcctacacaa gggagcgtgg ttcttagtct gcagcgggtg 1500  
cctggtgaat gagcgcactg tggtggtggc tgccactgt gttactgacc 1550

tggggaaggt caccatgatc aagacagcag acctgaaagt tgttttgggg 1600  
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650  
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700  
 ctgacatcgc catcctgaag ctcctagaca aggcccgtat cagcacccga 1750  
 gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttccttcca 1800  
 ggagtccac atcactgtgg ctggctggaa tgtcctggca gacgtgagga 1850  
 gccctggctt caagaacgac aactgcgct ctgggggtgt cagtgtggtg 1900  
 gactcgtgc tgtgtgagga gcagcatgag gaccatggca tcccagtgag 1950  
 tgtcactgat aacatgttct gtgccagctg ggaaccact gcccttctg 2000  
 atatctgcac tgcagagaca ggaggcatcg cggctgtgtc cttcccgga 2050  
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100  
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaaggtgc 2150  
 tgccttttaa agactggatt gaaagaaata tgaaatgaac catgctcatg 2200  
 cactccttga gaagtgttct tgtatatccg tctgtacgtg tgtcattgcg 2250  
 tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300  
 cagggttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350  
 cattgctggt aggtgatgc cgcgtccact actaggacag ccaattggaa 2400  
 gatgccagg cttgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450  
 aacctctcca ctccactgac ctggtggtct tcccaactt tcagttatac 2500  
 gaatgccatc agcttgacca gggaagatct gggcttcatg agggcccttt 2550  
 tgaggctctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600  
 gagctgggat gtggtgcatg ctttgtgta catggccaca gtacagtctg 2650  
 gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700  
 gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 38  
 <211> 720  
 <212> PRT  
 <213> Homo Sapien



<400> 38

Met	Glu	Leu	Gly	Cys	Trp	Thr	Gln	Leu	Gly	Leu	Thr	Phe	Leu	Gln	
1				5					10					15	
Leu	Leu	Leu	Ile	Ser	Ser	Leu	Pro	Arg	Glu	Tyr	Thr	Val	Ile	Asn	
				20					25					30	
Glu	Ala	Cys	Pro	Gly	Ala	Glu	Trp	Asn	Ile	Met	Cys	Arg	Glu	Cys	
				35					40					45	
Cys	Glu	Tyr	Asp	Gln	Ile	Glu	Cys	Val	Cys	Pro	Gly	Lys	Arg	Glu	
				50					55					60	
Val	Val	Gly	Tyr	Thr	Ile	Pro	Cys	Cys	Arg	Asn	Glu	Glu	Asn	Glu	
				65					70					75	
Cys	Asp	Ser	Cys	Leu	Ile	His	Pro	Gly	Cys	Thr	Ile	Phe	Glu	Asn	
				80					85					90	
Cys	Lys	Ser	Cys	Arg	Asn	Gly	Ser	Trp	Gly	Gly	Thr	Leu	Asp	Asp	
				95					100					105	
Phe	Tyr	Val	Lys	Gly	Phe	Tyr	Cys	Ala	Glu	Cys	Arg	Ala	Gly	Trp	
				110					115					120	
Tyr	Gly	Gly	Asp	Cys	Met	Arg	Cys	Gly	Gln	Val	Leu	Arg	Ala	Pro	
				125					130					135	
Lys	Gly	Gln	Ile	Leu	Leu	Glu	Ser	Tyr	Pro	Leu	Asn	Ala	His	Cys	
				140					145					150	
Glu	Trp	Thr	Ile	His	Ala	Lys	Pro	Gly	Phe	Val	Ile	Gln	Leu	Arg	
				155					160					165	
Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	
				170					175					180	
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	
				185					190					195	
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	
				200					205					210	
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	
				215					220					225	
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	
				230					235					240	
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	
				245					250					255	
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	
				260					265					270	
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	
				275					280					285	

Pro Val Asn Gly Tyr Gln Lys Ile Thr Gly Gly Pro Gly Leu Ile	290	295	300
Asn Gly Arg His Ala Lys Ile Gly Thr Val Val Ser Phe Phe Cys	305	310	315
Asn Asn Ser Tyr Val Leu Ser Gly Asn Glu Lys Arg Thr Cys Gln	320	325	330
Gln Asn Gly Glu Trp Ser Gly Lys Gln Pro Ile Cys Ile Lys Ala	335	340	345
Cys Arg Glu Pro Lys Ile Ser Asp Leu Val Arg Arg Arg Val Leu	350	355	360
Pro Met Gln Val Gln Ser Arg Glu Thr Pro Leu His Gln Leu Tyr	365	370	375
Ser Ala Ala Phe Ser Lys Gln Lys Leu Gln Ser Ala Pro Thr Lys	380	385	390
Lys Pro Ala Leu Pro Phe Gly Asp Leu Pro Met Gly Tyr Gln His	395	400	405
Leu His Thr Gln Leu Gln Tyr Glu Cys Ile Ser Pro Phe Tyr Arg	410	415	420
Arg Leu Gly Ser Ser Arg Arg Thr Cys Leu Arg Thr Gly Lys Trp	425	430	435
Ser Gly Arg Ala Pro Ser Cys Ile Pro Ile Cys Gly Lys Ile Glu	440	445	450
Asn Ile Thr Ala Pro Lys Thr Gln Gly Leu Arg Trp Pro Trp Gln	455	460	465
Ala Ala Ile Tyr Arg Arg Thr Ser Gly Val His Asp Gly Ser Leu	470	475	480
His Lys Gly Ala Trp Phe Leu Val Cys Ser Gly Ala Leu Val Asn	485	490	495
Glu Arg Thr Val Val Val Ala Ala His Cys Val Thr Asp Leu Gly	500	505	510
Lys Val Thr Met Ile Lys Thr Ala Asp Leu Lys Val Val Leu Gly	515	520	525
Lys Phe Tyr Arg Asp Asp Asp Arg Asp Glu Lys Thr Ile Gln Ser	530	535	540
Leu Gln Ile Ser Ala Ile Ile Leu His Pro Asn Tyr Asp Pro Ile	545	550	555
Leu Leu Asp Ala Asp Ile Ala Ile Leu Lys Leu Leu Asp Lys Ala	560	565	570

Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	
				575					580					585	
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	
				590					595					600	
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	
				605					610					615	
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	
				620					625					630	
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	
				635					640					645	
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	
				650					655					660	
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	
				665					670					675	
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	
				680					685					690	
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	
				695					700					705	
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	
				710					715					720	

<210> 39  
 <211> 2571  
 <212> DNA  
 <213> Homo Sapien

<400> 39  
 ggttcctaca tcctctcatc tgagaatcag agagcataat cttcttacgg 50  
 gcccgatgatt tattaacgtg gcttaatctg aaggttctca gtcaaattct 100  
 ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150  
 ggctgggttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200  
 cacactgctc ggagaatgaa ggcgcttctg ttgctgggtc tgccttggtc 250  
 cagtctgct aactacattg acaatgtggg caacctgcac ttcctgtatt 300  
 cagaactctg taaaggtgcc tccactacg gcctgaccaa agataggaag 350  
 aggcgctcac aagatggctg tccagacggc tgtgagagcc tcacagccac 400  
 ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450  
 acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500  
 cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550

acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600  
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650  
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgcccctga 700  
agtctttcca aggttgtacc acctgattcc agatggtgaa attaccagca 750  
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800  
ggaggtagcg aaacccact ggtccatata attatccaac acatttatcg 850  
tgatggggtg atcgccagag acggccggct actgccagga gacatcattc 900  
taaagggtcaa cgggatggac atcagcaatg tccctcacia ctacgctgtg 950  
cgtctcctgc ggcagccctg ccaggtgctg tggctgactg tgatgcgtga 1000  
acagaagtgc cgcagcagga acaatggaca ggccccggat gcctacagac 1050  
cccagatga cagctttcat gtgattctca aaaaagtag ccccgaggag 1100  
cagcttgaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150  
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200  
agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250  
ccagaaagtg cggctcatct gattcaggcc agtgaaagac gtgttcacct 1300  
cgtcgtgtcc cgccagggtc ggcagcggag ccctgacata ttccaggaag 1350  
ccggctggaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400  
aacactccca agccctcca tcctacaatt acttgtcatg agaagggtgt 1450  
aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtcgcagggg 1500  
gagcatcaca tagagaatgg gatttgctta tctatgtcat cagtgttgag 1550  
cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600  
gttgaatgtg gatggggtcg aactgacaga ggtcagccgg agtgaggcag 1650  
tggcattatt gaaaagaaca tcctcctcga tagtactcaa agctttggaa 1700  
gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750  
ctccaaccac aacatggccc caccagtgga ctgggtccca tcctgggtca 1800  
tgtggctgga attaccacgg tgcttgata actgtaaaga tattgtatta 1850  
cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900  
agaatacaat ggaaacaaac cttttttcat caaatccatt gttgaaggaa 1950

caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000  
gtcaatggta gaagtacatc aggaatgata catgcttgct tggcaagact 2050  
gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100  
gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150  
aaataggcta agaagttgaa aactatatt tatcttgta gtttttatat 2200  
ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250  
tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300  
ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350  
atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400  
tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450  
ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500  
tattttttta aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550  
aaatattttt cagaagttaa a 2571

<210> 40  
<211> 632  
<212> PRT  
<213> Homo Sapien

<400> 40  
Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala  
1 5 10 15  
Asn Tyr Ile Asp Asn Val Gly Asn Leu His Phe Leu Tyr Ser Glu  
20 25 30  
Leu Cys Lys Gly Ala Ser His Tyr Gly Leu Thr Lys Asp Arg Lys  
35 40 45  
Arg Arg Ser Gln Asp Gly Cys Pro Asp Gly Cys Ala Ser Leu Thr  
50 55 60  
Ala Thr Ala Pro Ser Pro Glu Val Ser Ala Ala Ala Thr Ile Ser  
65 70 75  
Leu Met Thr Asp Glu Pro Gly Leu Asp Asn Pro Ala Tyr Val Ser  
80 85 90  
Ser Ala Glu Asp Gly Gln Pro Ala Ile Ser Pro Val Asp Ser Gly  
95 100 105  
Arg Ser Asn Arg Thr Arg Ala Arg Pro Phe Glu Arg Ser Thr Ile  
110 115 120  
Arg Ser Arg Ser Phe Lys Lys Ile Asn Arg Ala Leu Ser Val Leu

				125					130					135
Arg	Arg	Thr	Lys	Ser	Gly	Ser	Ala	Val	Ala	Asn	His	Ala	Asp	Gln
				140					145					150
Gly	Arg	Glu	Asn	Ser	Glu	Asn	Thr	Thr	Ala	Pro	Glu	Val	Phe	Pro
				155					160					165
Arg	Leu	Tyr	His	Leu	Ile	Pro	Asp	Gly	Glu	Ile	Thr	Ser	Ile	Lys
				170					175					180
Ile	Asn	Arg	Val	Asp	Pro	Ser	Glu	Ser	Leu	Ser	Ile	Arg	Leu	Val
				185					190					195
Gly	Gly	Ser	Glu	Thr	Pro	Leu	Val	His	Ile	Ile	Ile	Gln	His	Ile
				200					205					210
Tyr	Arg	Asp	Gly	Val	Ile	Ala	Arg	Asp	Gly	Arg	Leu	Leu	Pro	Gly
				215					220					225
Asp	Ile	Ile	Leu	Lys	Val	Asn	Gly	Met	Asp	Ile	Ser	Asn	Val	Pro
				230					235					240
His	Asn	Tyr	Ala	Val	Arg	Leu	Leu	Arg	Gln	Pro	Cys	Gln	Val	Leu
				245					250					255
Trp	Leu	Thr	Val	Met	Arg	Glu	Gln	Lys	Phe	Arg	Ser	Arg	Asn	Asn
				260					265					270
Gly	Gln	Ala	Pro	Asp	Ala	Tyr	Arg	Pro	Arg	Asp	Asp	Ser	Phe	His
				275					280					285
Val	Ile	Leu	Asn	Lys	Ser	Ser	Pro	Glu	Glu	Gln	Leu	Gly	Ile	Lys
				290					295					300
Leu	Val	Arg	Lys	Val	Asp	Glu	Pro	Gly	Val	Phe	Ile	Phe	Asn	Val
				305					310					315
Leu	Asp	Gly	Gly	Val	Ala	Tyr	Arg	His	Gly	Gln	Leu	Glu	Glu	Asn
				320					325					330
Asp	Arg	Val	Leu	Ala	Ile	Asn	Gly	His	Asp	Leu	Arg	Tyr	Gly	Ser
				335					340					345
Pro	Glu	Ser	Ala	Ala	His	Leu	Ile	Gln	Ala	Ser	Glu	Arg	Arg	Val
				350					355					360
His	Leu	Val	Val	Ser	Arg	Gln	Val	Arg	Gln	Arg	Ser	Pro	Asp	Ile
				365					370					375
Phe	Gln	Glu	Ala	Gly	Trp	Asn	Ser	Asn	Gly	Ser	Trp	Ser	Pro	Gly
				380					385					390
Pro	Gly	Glu	Arg	Ser	Asn	Thr	Pro	Lys	Pro	Leu	His	Pro	Thr	Ile
				395					400					405
Thr	Cys	His	Glu	Lys	Val	Val	Asn	Ile	Gln	Lys	Asp	Pro	Gly	Glu

410					415					420				
Ser	Leu	Gly	Met	Thr	Val	Ala	Gly	Gly	Ala	Ser	His	Arg	Glu	Trp
				425					430					435
Asp	Leu	Pro	Ile	Tyr	Val	Ile	Ser	Val	Glu	Pro	Gly	Gly	Val	Ile
				440					445					450
Ser	Arg	Asp	Gly	Arg	Ile	Lys	Thr	Gly	Asp	Ile	Leu	Leu	Asn	Val
				455					460					465
Asp	Gly	Val	Glu	Leu	Thr	Glu	Val	Ser	Arg	Ser	Glu	Ala	Val	Ala
				470					475					480
Leu	Leu	Lys	Arg	Thr	Ser	Ser	Ser	Ile	Val	Leu	Lys	Ala	Leu	Glu
				485					490					495
Val	Lys	Glu	Tyr	Glu	Pro	Gln	Glu	Asp	Cys	Ser	Ser	Pro	Ala	Ala
				500					505					510
Leu	Asp	Ser	Asn	His	Asn	Met	Ala	Pro	Pro	Ser	Asp	Trp	Ser	Pro
				515					520					525
Ser	Trp	Val	Met	Trp	Leu	Glu	Leu	Pro	Arg	Cys	Leu	Tyr	Asn	Cys
				530					535					540
Lys	Asp	Ile	Val	Leu	Arg	Arg	Asn	Thr	Ala	Gly	Ser	Leu	Gly	Phe
				545					550					555
Cys	Ile	Val	Gly	Gly	Tyr	Glu	Glu	Tyr	Asn	Gly	Asn	Lys	Pro	Phe
				560					565					570
Phe	Ile	Lys	Ser	Ile	Val	Glu	Gly	Thr	Pro	Ala	Tyr	Asn	Asp	Gly
				575					580					585
Arg	Ile	Arg	Cys	Gly	Asp	Ile	Leu	Leu	Ala	Val	Asn	Gly	Arg	Ser
				590					595					600
Thr	Ser	Gly	Met	Ile	His	Ala	Cys	Leu	Ala	Arg	Leu	Leu	Lys	Glu
				605					610					615
Leu	Lys	Gly	Arg	Ile	Thr	Leu	Thr	Ile	Val	Ser	Trp	Pro	Gly	Thr
				620					625					630

Phe Leu

<210> 41

<211> 1964

<212> DNA

<213> Homo Sapien

<400> 41

accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50

agctcaactt gaagctttct tgcctgcagt gaagcagaga gatagatatt 100

attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150  
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200  
gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250  
aaggagttca tggctaattt ccataagacc ctcattttgg ggaagggaaa 300  
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350  
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400  
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450  
ccggtatcgc cctcaggaat gtaaagcttt acagaggggc gccatcctcg 500  
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550  
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600  
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650  
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700  
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750  
tcccaagcat ctggtgggtg gcaggaacag cactgggtac aggttacgtt 800  
acagtggata ttttgggggt gttactgccc taagcagaga gcagtttttc 850  
aaggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900  
tgacctcaga ctcaggggtg agctccaaag aatgaaaatt tcccggcccc 950  
tgctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000  
aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050  
ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100  
aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150  
tgaccctgga tcttttgggtg atgtttggaa gaactgattc tttgtttgca 1200  
ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250  
acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300  
ctcctggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350  
tcattttgat catgaggggt aaatattgta atatggatac ttgaaggact 1400  
ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450  
tggttgaagg agatttattt aaatttgaag taatatatta tgggataaaa 1500  
ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550



cgtccaaggt agaaaggtac gaagatacaa tactgttatt catttatcct 1600  
 gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650  
 gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700  
 ggtagcagga ggggtggagtg tcggctgcaa aggcagcagt agctgagctg 1750  
 gttgcaggtg ctgatagcct tcaggggagg acctgccag gtatgccttc 1800  
 cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850  
 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900  
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950  
 gtgaaaaagc aaaa 1964

<210> 42  
 <211> 344  
 <212> PRT  
 <213> Homo Sapien

<400> 42  
 Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu  
 1 5 10 15  
 Leu Leu Leu Leu Thr Leu Cys Leu Thr Val Val Gly Trp Ala Thr  
 20 25 30  
 Ser Asn Tyr Phe Val Gly Ala Ile Gln Glu Ile Pro Lys Ala Lys  
 35 40 45  
 Glu Phe Met Ala Asn Phe His Lys Thr Leu Ile Leu Gly Lys Gly  
 50 55 60  
 Lys Thr Leu Thr Asn Glu Ala Ser Thr Lys Lys Val Glu Leu Asp  
 65 70 75  
 Asn Cys Pro Ser Val Ser Pro Tyr Leu Arg Gly Gln Ser Lys Leu  
 80 85 90  
 Ile Phe Lys Pro Asp Leu Thr Leu Glu Glu Val Gln Ala Glu Asn  
 95 100 105  
 Pro Lys Val Ser Arg Gly Arg Tyr Arg Pro Gln Glu Cys Lys Ala  
 110 115 120  
 Leu Gln Arg Val Ala Ile Leu Val Pro His Arg Asn Arg Glu Lys  
 125 130 135  
 His Leu Met Tyr Leu Leu Glu His Leu His Pro Phe Leu Gln Arg  
 140 145 150  
 Gln Gln Leu Asp Tyr Gly Ile Tyr Val Ile His Gln Ala Glu Gly  
 155 160 165

Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
			170						175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
			185						190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
			200						205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
			215						220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
			230						235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
			245						250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
			260						265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
			275						280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
			290						295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
			305						310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
			320						325					330	
Pro	Leu	Tyr	Ile	Asn	Ile	Thr	Val	Asp	Phe	Trp	Phe	Gly	Ala		
			335						340						

<210> 43  
 <211> 485  
 <212> DNA  
 <213> Homo Sapien

<400> 43  
 gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50  
 gctcccagat ctgggccgct tgccctctgc tctctctcct cctcgccagc 100  
 ctgaccagtg gctctgtttt cccacaacag acgggacaac ttgcagagct 150  
 gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200  
 agaggcgaag gaggcgagac acccacttcc ccatctgcat tttctgctgc 250  
 ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300  
 acctgccctg cccccgtccc ctcccttctt tatttattcc tgctgcccc 350  
 gaacataggt cttggaataa aatggctggg tcttttgttt tccaaaaaaa 400

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 44

<211> 84

<212> PRT

<213> Homo Sapien

<400> 44

Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu  
1 5 10 15

Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln  
20 25 30

Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala  
35 40 45

Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp  
50 55 60

Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg  
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr  
80

<210> 45

<211> 1076

<212> DNA

<213> Homo Sapien

<400> 45

gtggcttcat ttccagtggct gacttccaga gagcaatatg gctgggttccc 50

caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100

gcctctggac ccgtgaaaga gctgggtcggc tccgttggtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatag ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctgagcaaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400

ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atgggggaaga ggatgtgatt tatacctgga aggcctggg gcaagcagcc 550

aatgagtccc ataatgggtc catcctcccc atctcctgga gatggggaga 600  
aagtgatatg accttcatct gcgttgccag gaaccctgtc agcagaaaact 650  
tctcaagccc catccttgcc aggaagctct gtgaaggtgc tgctgatgac 700  
ccagattcct ccatgggtcct cctgtgtctc ctggttggtgc cctcctgct 750  
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800  
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaaact 850  
cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900  
tcacactaat agaacaatcc taaaggaaga tccagcaaata acggtttact 950  
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000  
atgccagaca caccaaggct atttgccat gagaatgtta tctagacagc 1050  
agtgcactcc cctaagtctc tgctca 1076

<210> 46  
<211> 335  
<212> PRT  
<213> Homo Sapien

<400> 46  
Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp  
1 5 10 15  
Gln Leu Thr Gly Ser Ala Ala Ser Gly Pro Val Lys Glu Leu Val  
20 25 30  
Gly Ser Val Gly Gly Ala Val Thr Phe Pro Leu Lys Ser Lys Val  
35 40 45  
Lys Gln Val Asp Ser Ile Val Trp Thr Phe Asn Thr Thr Pro Leu  
50 55 60  
Val Thr Ile Gln Pro Glu Gly Gly Thr Ile Ile Val Thr Gln Asn  
65 70 75  
Arg Asn Arg Glu Arg Val Asp Phe Pro Asp Gly Gly Tyr Ser Leu  
80 85 90  
Lys Leu Ser Lys Leu Lys Lys Asn Asp Ser Gly Ile Tyr Tyr Val  
95 100 105  
Gly Ile Tyr Ser Ser Ser Leu Gln Gln Pro Ser Thr Gln Glu Tyr  
110 115 120  
Val Leu His Val Tyr Glu His Leu Ser Lys Pro Lys Val Thr Met  
125 130 135  
Gly Leu Gln Ser Asn Lys Asn Gly Thr Cys Val Thr Asn Leu Thr  
140 145 150

Cys	Cys	Met	Glu	His	Gly	Glu	Glu	Asp	Val	Ile	Tyr	Thr	Trp	Lys
				155					160					165
Ala	Leu	Gly	Gln	Ala	Ala	Asn	Glu	Ser	His	Asn	Gly	Ser	Ile	Leu
				170					175					180
Pro	Ile	Ser	Trp	Arg	Trp	Gly	Glu	Ser	Asp	Met	Thr	Phe	Ile	Cys
				185					190					195
Val	Ala	Arg	Asn	Pro	Val	Ser	Arg	Asn	Phe	Ser	Ser	Pro	Ile	Leu
				200					205					210
Ala	Arg	Lys	Leu	Cys	Glu	Gly	Ala	Ala	Asp	Asp	Pro	Asp	Ser	Ser
				215					220					225
Met	Val	Leu	Leu	Cys	Leu	Leu	Leu	Val	Pro	Leu	Leu	Leu	Ser	Leu
				230					235					240
Phe	Val	Leu	Gly	Leu	Phe	Leu	Trp	Phe	Leu	Lys	Arg	Glu	Arg	Gln
				245					250					255
Glu	Glu	Tyr	Ile	Glu	Glu	Lys	Lys	Arg	Val	Asp	Ile	Cys	Arg	Glu
				260					265					270
Thr	Pro	Asn	Ile	Cys	Pro	His	Ser	Gly	Glu	Asn	Thr	Glu	Tyr	Asp
				275					280					285
Thr	Ile	Pro	His	Thr	Asn	Arg	Thr	Ile	Leu	Lys	Glu	Asp	Pro	Ala
				290					295					300
Asn	Thr	Val	Tyr	Ser	Thr	Val	Glu	Ile	Pro	Lys	Lys	Met	Glu	Asn
				305					310					315
Pro	His	Ser	Leu	Leu	Thr	Met	Pro	Asp	Thr	Pro	Arg	Leu	Phe	Ala
				320					325					330
Tyr	Glu	Asn	Val	Ile										
				335										

<210> 47

<211> 766

<212> DNA

<213> Homo Sapien

<400> 47

ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50

gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100

ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150

tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200

agcaggtctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250

aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300

agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350  
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400  
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450  
 ttcaacttgc agtgggtttt caatgactct tgtgcacctc ctactggttt 500  
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550  
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600  
 gtatttttag gtctattgct tgttggaatt ctggagggtcc tgtttgggct 650  
 cagtcagata gtcattcggtt tccttggctg tctgtgtgga gtctctaagc 700  
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750  
 gtttgaaaaa aaaaaa 766

<210> 48  
 <211> 229  
 <212> PRT  
 <213> Homo Sapien

<400> 48  
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu  
 1 5 10 15  
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu  
 20 25 30  
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile  
 35 40 45  
 Ser Cys Phe Glu Trp Trp Phe Pro Gly Ile Ile Gly Ala Gly Leu  
 50 55 60  
 Met Ala Ile Pro Ala Thr Thr Met Ser Leu Thr Ala Arg Lys Arg  
 65 70 75  
 Ala Cys Cys Asn Asn Arg Thr Gly Met Phe Leu Ser Ser Phe Phe  
 80 85 90  
 Ser Val Ile Thr Val Ile Gly Ala Leu Tyr Cys Met Leu Ile Ser  
 95 100 105  
 Ile Gln Ala Leu Leu Lys Gly Pro Leu Met Cys Asn Ser Pro Ser  
 110 115 120  
 Asn Ser Asn Ala Asn Cys Glu Phe Ser Leu Lys Asn Ile Ser Asp  
 125 130 135  
 Ile His Pro Glu Ser Phe Asn Leu Gln Trp Phe Phe Asn Asp Ser  
 140 145 150  
 Cys Ala Pro Pro Thr Gly Phe Asn Lys Pro Thr Ser Asn Asp Thr

	155		160		165									
Met	Ala	Ser	Gly	Trp	Arg	Ala	Ser	Ser	Phe	His	Phe	Asp	Ser	Glu
				170					175					180
Glu	Asn	Lys	His	Arg	Leu	Ile	His	Phe	Ser	Val	Phe	Leu	Gly	Leu
				185					190					195
Leu	Leu	Val	Gly	Ile	Leu	Glu	Val	Leu	Phe	Gly	Leu	Ser	Gln	Ile
				200					205					210
Val	Ile	Gly	Phe	Leu	Gly	Cys	Leu	Cys	Gly	Val	Ser	Lys	Arg	Arg
				215					220					225

Ser Gln Ile Val

<210> 49  
 <211> 636  
 <212> DNA  
 <213> Homo Sapien

<400> 49  
 atccgttctc tgcgctgccca gctcaggtga gccctcgcca aggtgacctc 50  
 gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100  
 ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150  
 cgccccagtg cctctcccc tgcagccctg ccctcgaac tgtgacatgg 200  
 agagagtgac cctggccctt ctctactgg caggcctgac tgccttgga 250  
 gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300  
 aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350  
 ggatcgcggc agttctgagt ggcaaagca aatacaagag cagccagaag 400  
 cagcacagtc ctgtacctga gaaggccatc ccaactcatca ctccaggctc 450  
 tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500  
 taacactggc cccagcacc tcctccctg ggaggcctta tcctcaagga 550  
 aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600  
 ttctttatga attaaactcg cccaccacc ccctca 636

<210> 50  
 <211> 89  
 <212> PRT  
 <213> Homo Sapien

<400> 50  
 Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr  
 1 5 10 15

Ala	Leu	Glu	Ala	Asn	Asp	Pro	Phe	Ala	Asn	Lys	Asp	Asp	Pro	Phe
				20					25					30
Tyr	Tyr	Asp	Trp	Lys	Asn	Leu	Gln	Leu	Ser	Gly	Leu	Ile	Cys	Gly
				35					40					45
Gly	Leu	Leu	Ala	Ile	Ala	Gly	Ile	Ala	Ala	Val	Leu	Ser	Gly	Lys
				50					55					60
Cys	Lys	Tyr	Lys	Ser	Ser	Gln	Lys	Gln	His	Ser	Pro	Val	Pro	Glu
				65					70					75
Lys	Ala	Ile	Pro	Leu	Ile	Thr	Pro	Gly	Ser	Ala	Thr	Thr	Cys	
				80					85					

<210> 51

<211> 1734

<212> DNA

<213> Homo Sapien

<400> 51

```

gtggactctg agaagcccag gcagttgagg acaggagaga gaaggctgca 50
gacccagagg gagggaggac agggagtcgg aaggaggagg acagaggagg 100
gcacagagac gcagagcaag ggcggcaagg aggagaccct ggtgggagga 150
agacactctg gagagagagg gggctgggca gagatgaagt tccagggggc 200
cctggcctgc ctctgctgg ccctctgcct gggcagtggg gaggctggcc 250
ccctgcagag cggagaggaa agcactggga caaatattgg ggaggccctt 300
ggacatggcc tgggagacgc cctgagcgaa ggggtgggaa aggccattgg 350
caaagaggcc ggaggggagc ctggctctaa agtcagttag gcccttggcc 400
aaggggaccag agaagcagtt ggcactggag tcaggcaggt tccaggcttt 450
ggcgcagcag atgctttggg caacagggtc ggggaagcag cccatgctct 500
gggaaacact gggcacgaga ttggcagaca ggcagaagat gtcattcgac 550
acggagcaga tgctgtccgc ggctcctggc aggggggtgcc tggccacagt 600
ggtgcttggg aaacttctgg aggccatggc atctttggct ctcaaggtgg 650
ccttgagggc cagggccagg gcaatcctgg aggtctgggg actccgtggg 700
tccacggata ccccggaac tcagcaggca gctttggaat gaatcctcag 750
ggagctccct ggggtcaagg aggcaatgga gggccaccaa actttgggac 800
caacactcag ggagctgtgg ccagcctgg ctatggttca gtgagagcca 850
gcaaccagaa tgaagggtgc acgaatcccc caccatctgg ctgaggtgga 900

```



ggctccagca actctggggg aggcagcggc tcacagtcgg gcagcagtg 950  
 cagtggcagc aatggtgaca acaacaatgg cagcagcagt ggtggcagca 1000  
 gcagtggcag cagcagtggc agcagcagtg gcggcagcag tggcggcagc 1050  
 agtgggtggca gcagtggcaa cagtgggtggc agcagaggtg acagcggcag 1100  
 tgagtccctcc tggggatcca gcaccggctc ctctccggc aaccacggtg 1150  
 ggagcggcgg aggaaatgga cataaaccgg ggtgtgaaaa gccagggaat 1200  
 gaagcccgcg ggagcgggga atctgggatt cagggcttca gaggacaggg 1250  
 agtttccagc aacatgaggg aaataagcaa agagggcaat cgcctccttg 1300  
 gaggtcttgg agacaattat cgggggcaag ggtcgagctg gggcagtgga 1350  
 ggaggtgacg ctgttggtgg agtcaatact gtgaactctg agacgtctcc 1400  
 tgggatgttt aactttgaca ctttctggaa gaattttaaa tccaagctgg 1450  
 gtttcatcaa ctgggatgcc ataaacaagg accagagaag ctctcgcatc 1500  
 ccgtgacctc cagacaagga gccaccagat tggatgggag cccccacact 1550  
 cctccttaa aacaccaccc tctcatcact aatctcagcc cttgcccttg 1600  
 aaataaacct tagctgcccc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1734

<210> 52  
 <211> 440  
 <212> PRT  
 <213> Homo Sapien

<400> 52  
 Met Lys Phe Gln Gly Pro Leu Ala Cys Leu Leu Leu Ala Leu Cys  
 1 5 10 15  
 Leu Gly Ser Gly Glu Ala Gly Pro Leu Gln Ser Gly Glu Glu Ser  
 20 25 30  
 Thr Gly Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp  
 35 40 45  
 Ala Leu Ser Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly  
 50 55 60  
 Gly Ala Ala Gly Ser Lys Val Ser Glu Ala Leu Gly Gln Gly Thr  
 65 70 75  
 Arg Glu Ala Val Gly Thr Gly Val Arg Gln Val Pro Gly Phe Gly  
 80 85 90

Ala	Ala	Asp	Ala	Leu	Gly	Asn	Arg	Val	Gly	Glu	Ala	Ala	His	Ala		95	100	105
Leu	Gly	Asn	Thr	Gly	His	Glu	Ile	Gly	Arg	Gln	Ala	Glu	Asp	Val		110	115	120
Ile	Arg	His	Gly	Ala	Asp	Ala	Val	Arg	Gly	Ser	Trp	Gln	Gly	Val		125	130	135
Pro	Gly	His	Ser	Gly	Ala	Trp	Glu	Thr	Ser	Gly	Gly	His	Gly	Ile		140	145	150
Phe	Gly	Ser	Gln	Gly	Gly	Leu	Gly	Gly	Gln	Gly	Gln	Gly	Asn	Pro		155	160	165
Gly	Gly	Leu	Gly	Thr	Pro	Trp	Val	His	Gly	Tyr	Pro	Gly	Asn	Ser		170	175	180
Ala	Gly	Ser	Phe	Gly	Met	Asn	Pro	Gln	Gly	Ala	Pro	Trp	Gly	Gln		185	190	195
Gly	Gly	Asn	Gly	Gly	Pro	Pro	Asn	Phe	Gly	Thr	Asn	Thr	Gln	Gly		200	205	210
Ala	Val	Ala	Gln	Pro	Gly	Tyr	Gly	Ser	Val	Arg	Ala	Ser	Asn	Gln		215	220	225
Asn	Glu	Gly	Cys	Thr	Asn	Pro	Pro	Pro	Ser	Gly	Ser	Gly	Gly	Gly		230	235	240
Ser	Ser	Asn	Ser	Gly	Gly	Gly	Ser	Gly	Ser	Gln	Ser	Gly	Ser	Ser		245	250	255
Gly	Ser	Gly	Ser	Asn	Gly	Asp	Asn	Asn	Asn	Gly	Ser	Ser	Ser	Gly		260	265	270
Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Ser	Ser	Ser	Gly	Gly	Ser		275	280	285
Ser	Gly	Gly	Ser	Ser	Gly	Gly	Ser	Ser	Gly	Asn	Ser	Gly	Gly	Ser		290	295	300
Arg	Gly	Asp	Ser	Gly	Ser	Glu	Ser	Ser	Trp	Gly	Ser	Ser	Thr	Gly		305	310	315
Ser	Ser	Ser	Gly	Asn	His	Gly	Gly	Ser	Gly	Gly	Gly	Asn	Gly	His		320	325	330
Lys	Pro	Gly	Cys	Glu	Lys	Pro	Gly	Asn	Glu	Ala	Arg	Gly	Ser	Gly		335	340	345
Glu	Ser	Gly	Ile	Gln	Gly	Phe	Arg	Gly	Gln	Gly	Val	Ser	Ser	Asn		350	355	360
Met	Arg	Glu	Ile	Ser	Lys	Glu	Gly	Asn	Arg	Leu	Leu	Gly	Gly	Ser		365	370	375

Gly	Asp	Asn	Tyr	Arg	Gly	Gln	Gly	Ser	Ser	Trp	Gly	Ser	Gly	Gly
				380					385					390
Gly	Asp	Ala	Val	Gly	Gly	Val	Asn	Thr	Val	Asn	Ser	Glu	Thr	Ser
				395					400					405
Pro	Gly	Met	Phe	Asn	Phe	Asp	Thr	Phe	Trp	Lys	Asn	Phe	Lys	Ser
				410					415					420
Lys	Leu	Gly	Phe	Ile	Asn	Trp	Asp	Ala	Ile	Asn	Lys	Asp	Gln	Arg
				425					430					435
Ser	Ser	Arg	Ile	Pro										
				440										

<210> 53

<211> 1676

<212> DNA

<213> Homo Sapien

<400> 53

```

ggagaagagg ttgtgtggga caagctgctc ccgacagaag gatgtcgctg 50
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
actcctgctg ctggttgtgg gctcctggct actcgcccg c atcctggctt 150
ggacctatgc cttctataac aactgccgcc ggctccagtg tttccacag 200
ccccaaaac ggaactggtt ttggggtcac ctgggcctga tcactcctac 250
agaggagggc ttgaaggact cgaccagat gtcggccacc tattcccagg 300
gctttacggt atggctgggt cccatcatcc ccttcatcgt tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgcaccaa 400
ggataatctc ttcatacagg tcttgaagcc ctggctggga gaagggatac 450
tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500
gccttccatt tcaacatcct gaagtcctat ataacgatct tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700
atatattgcc accatcttgg agctcagtgc ccttgtagag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacctctc ccatgacggg 800
cggcgcttcc acagggcctg ccgcttgggt catgacttca cagacgctgt 850
catccgggag cggcgctgca ccctccccac tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagactttgg atttcattga tgtgcttctg 950

```

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000  
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050  
 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100  
 tgccgacagg aggtgcaaga gcttctgaag gaccgcatc ctaaagagat 1150  
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200  
 agagcctgag gttacatccc ccagctccct tcatctcccg atgctgcacc 1250  
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300  
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350  
 ctgaggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400  
 tcacctctgg cttttattcc tttctccgca gggcccagga actgcatcgg 1450  
 gcaggcgctc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500  
 tgcacttccg gttcctgcc aaccacactg agccccgcag gaagctggaa 1550  
 ttgatcatgc gcgccgagg cgggctttgg ctgcgggtgg agcccctgaa 1600  
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650  
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 54  
 <211> 524  
 <212> PRT  
 <213> Homo Sapien

<400> 54  
 Met Ser Leu Leu Ser Leu Pro Trp Leu Gly Leu Arg Pro Val Ala  
 1 5 10 15  
 Met Ser Pro Trp Leu Leu Leu Leu Leu Val Val Gly Ser Trp Leu  
 20 25 30  
 Leu Ala Arg Ile Leu Ala Trp Thr Tyr Ala Phe Tyr Asn Asn Cys  
 35 40 45  
 Arg Arg Leu Gln Cys Phe Pro Gln Pro Pro Lys Arg Asn Trp Phe  
 50 55 60  
 Trp Gly His Leu Gly Leu Ile Thr Pro Thr Glu Glu Gly Leu Lys  
 65 70 75  
 Asp Ser Thr Gln Met Ser Ala Thr Tyr Ser Gln Gly Phe Thr Val  
 80 85 90  
 Trp Leu Gly Pro Ile Ile Pro Phe Ile Val Leu Cys His Pro Asp  
 95 100 105

Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys	110	115	120
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly	125	130	135
Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390

Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	
				395					400					405	
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	
				410					415					420	
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	
				425					430					435	
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	
				440					445					450	
Lys	Gly	Arg	Ser	Pro	Leu	Ala	Phe	Ile	Pro	Phe	Ser	Ala	Gly	Pro	
				455					460					465	
Arg	Asn	Cys	Ile	Gly	Gln	Ala	Phe	Ala	Met	Ala	Glu	Met	Lys	Val	
				470					475					480	
Val	Leu	Ala	Leu	Met	Leu	Leu	His	Phe	Arg	Phe	Leu	Pro	Asp	His	
				485					490					495	
Thr	Glu	Pro	Arg	Arg	Lys	Leu	Glu	Leu	Ile	Met	Arg	Ala	Glu	Gly	
				500					505					510	
Gly	Leu	Trp	Leu	Arg	Val	Glu	Pro	Leu	Asn	Val	Gly	Leu	Gln		
				515					520						

<210> 55

<211> 644

<212> DNA

<213> Homo Sapien

<400> 55

```

atcgcatcaa ttgggagtag catcttcctc atgggaccag tgaaacagct 50
gaagcgaatg tttgagccta ctggtttgat tgcaactatc atggtgctgt 100
tgtgttttgc acttaccttg tgttctgcct tttggtggca taacaaggga 150
cttgacttta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200
cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
tggaacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
cagtagcaca ggatgagaag tgggttctgt atcttgtgga gtggaatctt 500
cctcatgtac ctgtttcctc tctggatggt gtccactga attcccatga 550
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

```

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 56

<211> 77

<212> PRT

<213> Homo Sapien

<400> 56

Met	Gly	Pro	Val	Lys	Gln	Leu	Lys	Arg	Met	Phe	Glu	Pro	Thr	Arg
1				5					10					15

Leu	Ile	Ala	Thr	Ile	Met	Val	Leu	Leu	Cys	Phe	Ala	Leu	Thr	Leu
				20					25					30

Cys	Ser	Ala	Phe	Trp	Trp	His	Asn	Lys	Gly	Leu	Ala	Leu	Ile	Phe
				35					40					45

Cys	Ile	Leu	Gln	Ser	Leu	Ala	Leu	Thr	Trp	Tyr	Ser	Leu	Ser	Phe
				50					55					60

Ile	Pro	Phe	Ala	Arg	Asp	Ala	Val	Lys	Lys	Cys	Phe	Ala	Val	Cys
				65					70					75

Leu Ala

<210> 57

<211> 3334

<212> DNA

<213> Homo Sapien

<400> 57

cggctcgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50

ggccgccaac atgctctgtc tgtgcctgta cgtgccggtc atcggggaag 100

cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150

aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200

ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250

atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300

aagaagctga ggctggtggt taagattttg gacaaaaaga atgatggacg 350

cattgacgcg caggagatca tgcagtcctt gcgggacttg ggagtcaaga 400

tatctgaaca gcaggcagaa aaaatttctca agagcatgga taaaaacggc 450

acgatgacca tcgactggaa cgagtggaga gactaccacc tcctccaccc 500

cgtggaaaac atccccgaga tcattctcta ctggaagcat tccacgatct 550

ttgatgtggg tgagaatcta acgggtcccg atgagttcac agtggaggag 600

aggcagacgg ggatgtggtg gagacacctg gtggcaggag gtggggcagg 650

ggccgtatcc agaacctgca cggccccctt ggacaggctc aaggtgctca 700  
tgcagggtcca tgcctcccgc agcaacaaca tgggcatcgt tgggtggcttc 750  
actcagatga ttcgagaagg agggggccagg tcactctggc ggggcaatgg 800  
catcaacgtc ctcaaaattg cccccgaatc agccatcaaa ttcatggcct 850  
atgagcagat caagcgctt gttggtagt accaggagac tctgaggatt 900  
cacgagaggc ttgtggcagg gtccttggca ggggccatcg cccagagcag 950  
catctacca atggagggtc tgaagaccg gatggcgctg cggaagacag 1000  
gccagtactc aggaatgctg gactgcgcca ggaggatcct ggccagagag 1050  
ggggtggccg ccttctacaa aggctatgtc cccaacatgc tgggcatcat 1100  
cccctatgcc ggcacgacc ttgcagtcta cgagacgtc aagaatgcct 1150  
ggctgcagca ctatgcagt aacagcgcg accccggcgt gtttgtgctc 1200  
ctggcctgtg gcacatgtc cagtacctgt ggccagctgg ccagctaccc 1250  
cctggcccta gtcaggacc ggatgcaggc gcaagcctct attgagggcg 1300  
ctccggaggt gaccatgagc agcctcttca aacatatacct gcggaccgag 1350  
ggggccttcg ggctgtacag ggggctggcc cccaacttca tgaaggatcat 1400  
cccagctgtg agcatcagct acgtggtcta cgagaacctg aagatcaccc 1450  
tgggctgca gtcgcggtga cggggggagg gccgcccggc agtggactcg 1500  
ctgacatcgt gccgcagcct ggggtgtgca gccatctcat tctgtgaatg 1550  
tgccaacact aagctgtctc gagccaagct gtgaaaacc tagacgcacc 1600  
cgcagggagg gtggggagag ctggcaggcc cagggttgt cctgctgacc 1650  
ccagcagacc ctctgttgg ttccagcgaa gaccacaggc attccttagg 1700  
gtccagggtc agcaggctcc gggctcacat gtgtaaggac aggacatttt 1750  
ctgcagtgcc tgccaatagt gagcttggag cctggaggcc ggcttagttc 1800  
ttccatttca cccttgcagc cagctgttgg ccacggcccc tgccctctgg 1850  
tctgccgtgc atctccctgt gccctcttgc tgccctgctg tctgctgagg 1900  
taagggtggga ggagggtac agcccacatc ccacccctc gtccaatccc 1950  
ataatccatg atgaaagggt aggtcacgtg gcctcccagg cctgacttcc 2000  
caacctacag cattgacgcc aacttggctg tgaaggaaga ggaaaggatc 2050  
tggccttgtg gtcactggca tctgagccct gctgatggct ggggctctcg 2100



ggcatgcttg ggagtgcagg gggctcgggc tgcttggcct ggctgcacag 2150  
 aaggcaagtg ctgggggtca tgggtgctctg agctggcctg gaccctgtca 2200  
 ggatgggccc cacctcagaa ccaaactcac tgtccccact gtggcatgag 2250  
 ggcagtggag caccatgttt gagggcgaag ggcagagcgt ttgtgtgttc 2300  
 tggggaggga aggaaaaggt gttggaggcc ttaattatgg actgttggga 2350  
 aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400  
 ttccagagga agacgaggga gcaggagctt ggctgactgc tcagagtctg 2450  
 ttctgacgcc ctgggggttc ctgtccaacc ccagcagggg cgagcggga 2500  
 ccagccccac attccacttg tgtcactgct tggaaacctat ttattttgta 2550  
 tttatttgaa cagagttagt tcctaactat ttttatagat ttgtttaatt 2600  
 aatagcttgt catTTTTcaag ttcatttttt attcatattt atgttcatgg 2650  
 ttgattgtac cttcccaagc ccgcccagtg ggatgggagg aggaggagaa 2700  
 ggggggcctt gggccgctgc agtcacatct gtccagagaa attccttttg 2750  
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gtccttttcc 2800  
 tttggcaggt tggggaaggc cttgccccca gccttaggat ttcagggttt 2850  
 gactgggggc gtggagagag agggaggaac ctcaataacc ttgaaggtgg 2900  
 aatccagtta tttcctgcgc tgcgagggtt tctttatttc actcttttct 2950  
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000  
 ggctggagga gaggggtggg ggctggctcc gtccctccca gccttctgct 3050  
 gcccttgctt aacaatgccg gccaaactggc gacctcacgg ttgcacttcc 3100  
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaagatc 3150  
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaagca 3200  
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250  
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 58

<211> 469

<212> PRT

<213> Homo Sapien

<400> 58

Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln

1	5	10	15
Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu	20	25	30
Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe	35	40	45
Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp	50	55	60
Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr	65	70	75
Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu	80	85	90
Asp Lys Lys Asn Asp Gly Arg Ile Asp Ala Gln Glu Ile Met Gln	95	100	105
Ser Leu Arg Asp Leu Gly Val Lys Ile Ser Glu Gln Gln Ala Glu	110	115	120
Lys Ile Leu Lys Ser Met Asp Lys Asn Gly Thr Met Thr Ile Asp	125	130	135
Trp Asn Glu Trp Arg Asp Tyr His Leu Leu His Pro Val Glu Asn	140	145	150
Ile Pro Glu Ile Ile Leu Tyr Trp Lys His Ser Thr Ile Phe Asp	155	160	165
Val Gly Glu Asn Leu Thr Val Pro Asp Glu Phe Thr Val Glu Glu	170	175	180
Arg Gln Thr Gly Met Trp Trp Arg His Leu Val Ala Gly Gly Gly	185	190	195
Ala Gly Ala Val Ser Arg Thr Cys Thr Ala Pro Leu Asp Arg Leu	200	205	210
Lys Val Leu Met Gln Val His Ala Ser Arg Ser Asn Asn Met Gly	215	220	225
Ile Val Gly Gly Phe Thr Gln Met Ile Arg Glu Gly Gly Ala Arg	230	235	240
Ser Leu Trp Arg Gly Asn Gly Ile Asn Val Leu Lys Ile Ala Pro	245	250	255
Glu Ser Ala Ile Lys Phe Met Ala Tyr Glu Gln Ile Lys Arg Leu	260	265	270
Val Gly Ser Asp Gln Glu Thr Leu Arg Ile His Glu Arg Leu Val	275	280	285
Ala Gly Ser Leu Ala Gly Ala Ile Ala Gln Ser Ser Ile Tyr Pro			

290					295					300				
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln
				305					310					315
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu
				320					325					330
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly
				335					340					345
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu
				350					355					360
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro
				365					370					375
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys
				380					385					390
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met
				395					400					405
Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465

Val Gln Ser Arg

<210> 59  
 <211> 1658  
 <212> DNA  
 <213> Homo Sapien

<400> 59  
 ggaaggcagc ggcagctcca ctcagccagt acccagatac gctgggaacc 50  
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100  
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150  
 atttcaggga gacactccat cacagtcact actgtcgcct cagctgggaa 200  
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250  
 tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300  
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350

cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400  
ctttgcggct gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450  
tatatcatca cttctaaagg caaggggaat gctaaccttg agtataaaac 500  
tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550  
agaccttgcg gtgtgaggct ccccgatggc tccccagcc cacagtggtc 600  
tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650  
cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700  
tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaatgac 750  
attgccaaag caacagggga tatcaaagt acagaatcgg agatcaaaag 800  
gcgagatcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850  
ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900  
ctaaaataat gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950  
acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000  
ttctgggagg aaatgaattc atatctagaa gtctggagt agcaaacaag 1050  
agcaagaaac aaaaagaagc caaaagcaga aggctccaat atgaacaaga 1100  
taaattctatc ttcaaagaca tattagaagt tgggaaaata attcatgtga 1150  
actagacaag tgtgttaaga gtgataagta aaatgcacgt ggagacaagt 1200  
gcatccccag atctcaggga cctccccctg cctgtcacct ggggagttag 1250  
aggacaggat agtgcattgt ctttgtctct gaatttttag ttatatgtgc 1300  
tgtaatgttg ctctgaggaa gccctggaa agtctatccc aacatatcca 1350  
catcttatat tccacaaatt aagctgtagt atgtacccta agacgctgct 1400  
aattgactgc cacttcgcaa ctgagggcg gctgcatttt agtaatgggt 1450  
caaatgattc actttttatg atgcttccaa aggtgccttg gcttctcttc 1500  
ccaactgaca aatgccaaag ttgagaaaaa tgatcataat tttagcataa 1550  
acagagcagt cggggacacc gattttataa ataaactgag caccttcttt 1600  
ttaaacaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
aaaaaaaa 1658

<210> 60  
<211> 282

<212> PRT  
<213> Homo Sapien

<400> 60

Met	Ala	Ser	Leu	Gly	Gln	Ile	Leu	Phe	Trp	Ser	Ile	Ile	Ser	Ile	
1				5					10					15	
Ile	Ile	Ile	Leu	Ala	Gly	Ala	Ile	Ala	Leu	Ile	Ile	Gly	Phe	Gly	
				20					25					30	
Ile	Ser	Gly	Arg	His	Ser	Ile	Thr	Val	Thr	Thr	Val	Ala	Ser	Ala	
				35					40					45	
Gly	Asn	Ile	Gly	Glu	Asp	Gly	Ile	Leu	Ser	Cys	Thr	Phe	Glu	Pro	
				50					55					60	
Asp	Ile	Lys	Leu	Ser	Asp	Ile	Val	Ile	Gln	Trp	Leu	Lys	Glu	Gly	
				65					70					75	
Val	Leu	Gly	Leu	Val	His	Glu	Phe	Lys	Glu	Gly	Lys	Asp	Glu	Leu	
				80					85					90	
Ser	Glu	Gln	Asp	Glu	Met	Phe	Arg	Gly	Arg	Thr	Ala	Val	Phe	Ala	
				95					100					105	
Asp	Gln	Val	Ile	Val	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Lys	Asn	Val	
				110					115					120	
Gln	Leu	Thr	Asp	Ala	Gly	Thr	Tyr	Lys	Cys	Tyr	Ile	Ile	Thr	Ser	
				125					130					135	
Lys	Gly	Lys	Gly	Asn	Ala	Asn	Leu	Glu	Tyr	Lys	Thr	Gly	Ala	Phe	
				140					145					150	
Ser	Met	Pro	Glu	Val	Asn	Val	Asp	Tyr	Asn	Ala	Ser	Ser	Glu	Thr	
				155					160					165	
Leu	Arg	Cys	Glu	Ala	Pro	Arg	Trp	Phe	Pro	Gln	Pro	Thr	Val	Val	
				170					175					180	
Trp	Ala	Ser	Gln	Val	Asp	Gln	Gly	Ala	Asn	Phe	Ser	Glu	Val	Ser	
				185					190					195	
Asn	Thr	Ser	Phe	Glu	Leu	Asn	Ser	Glu	Asn	Val	Thr	Met	Lys	Val	
				200					205					210	
Val	Ser	Val	Leu	Tyr	Asn	Val	Thr	Ile	Asn	Asn	Thr	Tyr	Ser	Cys	
				215					220					225	
Met	Ile	Glu	Asn	Asp	Ile	Ala	Lys	Ala	Thr	Gly	Asp	Ile	Lys	Val	
				230					235					240	
Thr	Glu	Ser	Glu	Ile	Lys	Arg	Arg	Ser	His	Leu	Gln	Leu	Leu	Asn	
				245					250					255	
Ser	Lys	Ala	Ser	Leu	Cys	Val	Ser	Ser	Phe	Phe	Ala	Ile	Ser	Trp	
				260					265					270	

Ala Leu Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys  
275 280

<210> 61  
<211> 1617  
<212> DNA  
<213> Homo Sapien

<400> 61  
tgacgtcaga atcaccatgg ccagctatcc ttaccggcag ggctgcccag 50  
gagctgcagg acaagcacca ggagcccctc cgggtagcta ctaccctgga 100  
cccccaata gtggagggca gtatggtagt gggctacccc ctgggtgggtgg 150  
ttatgggggt cctgcccctg gagggcctta tggaccacca gctgggtggag 200  
ggccctatgg acaccccaat cctgggatgt tcccctctgg aactccagga 250  
ggaccatatg gcggtgcagc tcccgggggc ccctatggtc agccacctcc 300  
aagttcctac ggtgcccagc agcctgggct ttatggacag ggtggcgccc 350  
ctcccaatgt ggatcctgag gcctactcct ggttccagtc ggtggactca 400  
gatcacagtg gctatatctc catgaaggag ctaaagcagg ccctgggtcaa 450  
ctgcaattgg tcttcattca atgatgagac ctgcctcatg atgataaaca 500  
tgtttgacaa gaccaagtca ggccgcacgc atgtctacgg cttctcagcc 550  
ctgttgaaat tcatccagca gtggaagaac ctcttcagc agtatgaccg 600  
ggaccgctcg ggctccatta gctacacaga gctgcagcaa gctctgtccc 650  
aaatgggcta caacctgagc cccagttca cccagcttct ggtctcccgc 700  
tactgcccac gctctgccaa tctgcccagc cagcttgacc gcttcatcca 750  
gggtgtgcacc cagctgcagg tgctgacaga ggccttccgg gagaaggaca 800  
cagctgtaca aggcaacatc cggctcagct tcgaggactt cgtcaccatg 850  
acagcttctc ggatgctatg acccaaccat ctgtggagag tggagtgcac 900  
cagggacctt tcttggttcc ttagagtgag agaagtatgt ggacatctct 950  
tcttttctg tccctctaga agaacattct cccttgcttg atgcaacact 1000  
gttccaaaag aggggtggaga gtctgcac atagccacca aatagtgagg 1050  
accggggctg aggcacaca gataggggcc tgatggagga gaggatagaa 1100  
gttgaatgtc ctgatggcca tgagcagttg agtggcacag cctggcacca 1150  
ggagcaggtc cttgtaatgg agttagtgtc cagtcagctg agctccaccc 1200

tgatgccagt ggtgagtgtt catcggcctg ttaccgttag tacctgtgtt 1250  
 ccctcaccag gccatcctgt caaacgagcc cattttctcc aaagtggaat 1300  
 ctgaccaagc atgagagaga tctgtctatg ggaccagtgg cttggattct 1350  
 gccacacca taaatccttg tgtgttaact tctagctgcc tggggctggc 1400  
 cctgctcaga caaatctgct ccctgggcat ctttggccag gcttctgccc 1450  
 cctgcagctg ggacccctca cttgcctgcc atgctctgct cggcttcagt 1500  
 ctccaggaga cagtggtcac ctctccctgc caatactttt ttttaattgc 1550  
 attttttttc atttggggcc aaaagtccag tgaaattgta agcttcaata 1600  
 aaaggatgaa actctga 1617

<210> 62  
 <211> 284  
 <212> PRT  
 <213> Homo Sapien

<400> 62  
 Met Ala Ser Tyr Pro Tyr Arg Gln Gly Cys Pro Gly Ala Ala Gly  
 1 5 10 15  
 Gln Ala Pro Gly Ala Pro Pro Gly Ser Tyr Tyr Pro Gly Pro Pro  
 20 25 30  
 Asn Ser Gly Gly Gln Tyr Gly Ser Gly Leu Pro Pro Gly Gly Gly  
 35 40 45  
 Tyr Gly Gly Pro Ala Pro Gly Gly Pro Tyr Gly Pro Pro Ala Gly  
 50 55 60  
 Gly Gly Pro Tyr Gly His Pro Asn Pro Gly Met Phe Pro Ser Gly  
 65 70 75  
 Thr Pro Gly Gly Pro Tyr Gly Gly Ala Ala Pro Gly Gly Pro Tyr  
 80 85 90  
 Gly Gln Pro Pro Pro Ser Ser Tyr Gly Ala Gln Gln Pro Gly Leu  
 95 100 105  
 Tyr Gly Gln Gly Gly Ala Pro Pro Asn Val Asp Pro Glu Ala Tyr  
 110 115 120  
 Ser Trp Phe Gln Ser Val Asp Ser Asp His Ser Gly Tyr Ile Ser  
 125 130 135  
 Met Lys Glu Leu Lys Gln Ala Leu Val Asn Cys Asn Trp Ser Ser  
 140 145 150  
 Phe Asn Asp Glu Thr Cys Leu Met Met Ile Asn Met Phe Asp Lys  
 155 160 165

Thr	Lys	Ser	Gly	Arg	Ile	Asp	Val	Tyr	Gly	Phe	Ser	Ala	Leu	Trp
				170					175					180
Lys	Phe	Ile	Gln	Gln	Trp	Lys	Asn	Leu	Phe	Gln	Gln	Tyr	Asp	Arg
				185					190					195
Asp	Arg	Ser	Gly	Ser	Ile	Ser	Tyr	Thr	Glu	Leu	Gln	Gln	Ala	Leu
				200					205					210
Ser	Gln	Met	Gly	Tyr	Asn	Leu	Ser	Pro	Gln	Phe	Thr	Gln	Leu	Leu
				215					220					225
Val	Ser	Arg	Tyr	Cys	Pro	Arg	Ser	Ala	Asn	Pro	Ala	Met	Gln	Leu
				230					235					240
Asp	Arg	Phe	Ile	Gln	Val	Cys	Thr	Gln	Leu	Gln	Val	Leu	Thr	Glu
				245					250					255
Ala	Phe	Arg	Glu	Lys	Asp	Thr	Ala	Val	Gln	Gly	Asn	Ile	Arg	Leu
				260					265					270
Ser	Phe	Glu	Asp	Phe	Val	Thr	Met	Thr	Ala	Ser	Arg	Met	Leu	
				275					280					

<210> 63  
 <211> 1234  
 <212> DNA  
 <213> Homo Sapien

<400> 63  
 caggatgcag ggccgcgtgg cagggagctg cgctcctctg ggctgctcc 50  
  
 tggctgtct tcatctccca ggcctctttg cccggagcat cgggtgttgtg 100  
 gaggagaaag tttcccaaaa cttcgggacc aacttgctc agctcggaca 150  
  
 accttctcc actggcccct ctaactctga acatccgcag cccgctctgg 200  
 accctaggtc taatgacttg gcaagggttc ctctgaagct cagcgtgcct 250  
  
 ccatcagatg gcttccacc tgcaggaggt tctgcagtgc agaggtggcc 300  
 tccatcgtgg gggctgcctg ccatggattc ctggccccct gaggatcctt 350  
 ggcagatgat ggctgctgcg gctgaggacc gcctggggga agcgtgcct 400  
 gaagaactct cttacctctc cagtgtgcg gccctcgctc cgggcagtgg 450  
 ccctttgcct ggggagtctt ctcccgatgc cacaggcctc tcacctgagg 500  
 cttcactcct ccaccaggac tcggagtcca gacgactgcc ccgttctaata 550  
 tcaactggag ccgggggaaa aatcctttcc caacgccctc cctgggtctct 600  
 catccacagg gttctgcctg atcaccctg gggtagcctg aatcccagtg 650  
 tgtcctgggg aggtggaggc cctgggactg gttggggaac gaggcccatg 700



ccacaccctg aggggaatctg gggatatcaat aatcaacccc caggtaccag 750  
 ctggggaaat attaatcggg atccaggagg cagctgggga aatattaatc 800  
 ggtatccagg aggcagctgg gggaatatta atcggtatcc aggaggcagc 850  
 tgggggaata ttcactata cccaggtatc aataacccat ttcctcctgg 900  
 agttctccgc cctcctggct cttcttgga catcccagct ggcttcctta 950  
 atcctccaag ccctaggttg cagtggggct agagcacgat agagggaaac 1000  
 ccaacattgg gagttagagt cctgctcccg ccccttgctg tgtgggctca 1050  
 atccaggccc tgtaacatg tttccagcac tatccccact tttcagtgcc 1100  
 tcccctgctc atctccaata aaataaaagc acttatgaaa aaaaaaaaaa 1150  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1234

<210> 64  
 <211> 325  
 <212> PRT  
 <213> Homo Sapien

<400> 64  
 Met Gln Gly Arg Val Ala Gly Ser Cys Ala Pro Leu Gly Leu Leu  
 1 5 10 15  
 Leu Val Cys Leu His Leu Pro Gly Leu Phe Ala Arg Ser Ile Gly  
 20 25 30  
 Val Val Glu Glu Lys Val Ser Gln Asn Phe Gly Thr Asn Leu Pro  
 35 40 45  
 Gln Leu Gly Gln Pro Ser Ser Thr Gly Pro Ser Asn Ser Glu His  
 50 55 60  
 Pro Gln Pro Ala Leu Asp Pro Arg Ser Asn Asp Leu Ala Arg Val  
 65 70 75  
 Pro Leu Lys Leu Ser Val Pro Pro Ser Asp Gly Phe Pro Pro Ala  
 80 85 90  
 Gly Gly Ser Ala Val Gln Arg Trp Pro Pro Ser Trp Gly Leu Pro  
 95 100 105  
 Ala Met Asp Ser Trp Pro Pro Glu Asp Pro Trp Gln Met Met Ala  
 110 115 120  
 Ala Ala Ala Glu Asp Arg Leu Gly Glu Ala Leu Pro Glu Glu Leu  
 125 130 135  
 Ser Tyr Leu Ser Ser Ala Ala Ala Leu Ala Pro Gly Ser Gly Pro  
 140 145 150

Leu	Pro	Gly	Glu	Ser	Ser	Pro	Asp	Ala	Thr	Gly	Leu	Ser	Pro	Glu	
				155					160					165	
Ala	Ser	Leu	Leu	His	Gln	Asp	Ser	Glu	Ser	Arg	Arg	Leu	Pro	Arg	
				170					175					180	
Ser	Asn	Ser	Leu	Gly	Ala	Gly	Gly	Lys	Ile	Leu	Ser	Gln	Arg	Pro	
				185					190					195	
Pro	Trp	Ser	Leu	Ile	His	Arg	Val	Leu	Pro	Asp	His	Pro	Trp	Gly	
				200					205					210	
Thr	Leu	Asn	Pro	Ser	Val	Ser	Trp	Gly	Gly	Gly	Gly	Pro	Gly	Thr	
				215					220					225	
Gly	Trp	Gly	Thr	Arg	Pro	Met	Pro	His	Pro	Glu	Gly	Ile	Trp	Gly	
				230					235					240	
Ile	Asn	Asn	Gln	Pro	Pro	Gly	Thr	Ser	Trp	Gly	Asn	Ile	Asn	Arg	
				245					250					255	
Tyr	Pro	Gly	Gly	Ser	Trp	Gly	Asn	Ile	Asn	Arg	Tyr	Pro	Gly	Gly	
				260					265					270	
Ser	Trp	Gly	Asn	Ile	Asn	Arg	Tyr	Pro	Gly	Gly	Ser	Trp	Gly	Asn	
				275					280					285	
Ile	His	Leu	Tyr	Pro	Gly	Ile	Asn	Asn	Pro	Phe	Pro	Pro	Gly	Val	
				290					295					300	
Leu	Arg	Pro	Pro	Gly	Ser	Ser	Trp	Asn	Ile	Pro	Ala	Gly	Phe	Pro	
				305					310					315	
Asn	Pro	Pro	Ser	Pro	Arg	Leu	Gln	Trp	Gly						
				320					325						

<210> 65

<211> 422

<212> DNA

<213> Homo Sapien

<400> 65

```

aaggagagggc caccgggact tcagtgtctc ctccatccca ggagcgcagt 50
ggccactatg ggggtctgggc tgccccttgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctctatgag tccagcttcc tggaattgct 200
tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggcccgg ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400

```

ataaataaaa ttcggtatgc tg 422

<210> 66  
<211> 78  
<212> PRT  
<213> Homo Sapien

<400> 66  
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly  
1 5 10 15  
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu  
20 25 30  
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu  
35 40 45  
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly  
50 55 60  
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val  
65 70 75  
Cys Asn Thr

<210> 67  
<211> 744  
<212> DNA  
<213> Homo Sapien

<400> 67  
acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50  
caaagacgcc cgggccaggt gccccgtcgc aggtgcccct ggccggagat 100  
gcggtaggag gggcgagcgc gagaagcccc ttcctcggcg ctgccaaacc 150  
gccaccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200  
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250  
ccacttctgc aaatgagaat agcactgttt tgccttcata caccagctcc 300  
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350  
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcactgttgg 400  
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450  
agcgaggagc agttctccca tgcagccgag gcccgggccc ctcaggactc 500  
caaggagacg gtgcagggct gctgcccatt ctaggtcccc tctcctgcat 550  
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600  
gggcagtcag atccaccag tgcttaatag cagggaagaa ggtacttcaa 650

agactctgcc cctgagggtca agagaggatg gggctattca cttttatata 700

tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 68

<211> 123

<212> PRT

<213> Homo Sapien

<400> 68

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Leu	Ala	Leu	Gly	Leu	Pro
1				5					10					15

Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30

Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45

Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60

Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75

Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90

Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105

Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 69

<211> 3265

<212> DNA

<213> Homo Sapien

<400> 69

gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50  
cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100

tgaataataa tggctttgaa gatattgtca ttgttataga tcctagtgtg 150

ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200

ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250

tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300

ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350

actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400  
agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450  
caaaatgaat atggaccacc aggcaaactg tttgtccatg agtgggctca 500  
cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cctttctacc 550  
gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600  
ggtagaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650  
atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700  
ttcctgataa agtacaaaca gaaaaagcat ccataatgtt tatgcaaagt 750  
attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800  
tccaagccta caaacataa agtgcaattt tagaagtaca tgggaggtga 850  
ttagcaattc tgaggatttt aaaaacacca taccatggt gacaccacct 900  
cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950  
agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatcgaa 1000  
tgaatcaagc agcaaaacat ttcctgctgc agactgttga aaatggatcc 1050  
tgggtgggga tggttcactt tgatagtact gccactattg taaataagct 1100  
aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150  
ctacatatcc tctgggagga acttccatct gctctggaat taaatatgca 1200  
tttcaggtga ttggagagct acattcccaa ctcgatggat ccgaagtact 1250  
gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300  
tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350  
gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400  
tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450  
ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500  
aagggattaa cactgaatag taatgcctgg atgaacgaca ctgtcataat 1550  
tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600  
tgctccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650  
ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700  
tgcaaagggtg ggcacttggg catacaatct tcaagccaaa gcgaaccag 1750  
aaacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800

ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850  
cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900  
gagccaatgt gactgctttc attgaatcac agaattggaca tacagaagtt 1950  
ttggaacttt tggataatgg tgcaggcgct gattctttca agaattgatgg 2000  
agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050  
taaaagttcg ggctcatgga ggagcaaaca ctgccaggct aaaattacgg 2100  
cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150  
aattgaagca aacccgccaa gacctgaaat tgatgaggat actcagacca 2200  
ccttgaggga tttcagccga acagcatccg gaggtgcatt tgtggtatca 2250  
caagtcccaa gccttcctt gcctgaccaa taccaccaa gtcaaatac 2300  
agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350  
caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400  
ataagtgcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450  
agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500  
ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatattt 2550  
attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatccaa 2600  
cattgcacaa gtaactttgt ttatccctca agcaaatacct gatgacattg 2650  
atcctacacc tactcctact cctactccta ctctgataa aagtcataat 2700  
tctggagtta atattttctac gctgggtattg tctgtgattg ggtctgttgt 2750  
aattgttaac tttattttta gtaccacat ttgaacctta acgaagaaaa 2800  
aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850  
gtaaaggata tttctgaatc ttaaaattca tcccatgtgt gatcataaac 2900  
tcataaaaat aattttaaga tgtcgaaaa ggatactttg attaaataaa 2950  
aacactcatg gatatgtaaa aactgtcaag attaaaattt aatagtttca 3000  
tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050  
tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100  
gatatttcaa attgcatcaa gaaattaaaa tcattctatct gagtagtcaa 3150  
aatacaagta aaggagagca aataaacaac atttgaaaa aaaaaaaaaa 3200

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaaa 3265

<210> 70  
<211> 919  
<212> PRT  
<213> Homo Sapien

<400> 70  
Met Gly Leu Phe Arg Gly Phe Val Phe Leu Leu Val Leu Cys Leu  
1 5 10 15  
Leu His Gln Ser Asn Thr Ser Phe Ile Lys Leu Asn Asn Asn Gly  
20 25 30  
Phe Glu Asp Ile Val Ile Val Ile Asp Pro Ser Val Pro Glu Asp  
35 40 45  
Glu Lys Ile Ile Glu Gln Ile Glu Asp Met Val Thr Thr Ala Ser  
50 55 60  
Thr Tyr Leu Phe Glu Ala Thr Glu Lys Arg Phe Phe Phe Lys Asn  
65 70 75  
Val Ser Ile Leu Ile Pro Glu Asn Trp Lys Glu Asn Pro Gln Tyr  
80 85 90  
Lys Arg Pro Lys His Glu Asn His Lys His Ala Asp Val Ile Val  
95 100 105  
Ala Pro Pro Thr Leu Pro Gly Arg Asp Glu Pro Tyr Thr Lys Gln  
110 115 120  
Phe Thr Glu Cys Gly Glu Lys Gly Glu Tyr Ile His Phe Thr Pro  
125 130 135  
Asp Leu Leu Leu Gly Lys Lys Gln Asn Glu Tyr Gly Pro Pro Gly  
140 145 150  
Lys Leu Phe Val His Glu Trp Ala His Leu Arg Trp Gly Val Phe  
155 160 165  
Asp Glu Tyr Asn Glu Asp Gln Pro Phe Tyr Arg Ala Lys Ser Lys  
170 175 180  
Lys Ile Glu Ala Thr Arg Cys Ser Ala Gly Ile Ser Gly Arg Asn  
185 190 195  
Arg Val Tyr Lys Cys Gln Gly Gly Ser Cys Leu Ser Arg Ala Cys  
200 205 210  
Arg Ile Asp Ser Thr Thr Lys Leu Tyr Gly Lys Asp Cys Gln Phe  
215 220 225  
Phe Pro Asp Lys Val Gln Thr Glu Lys Ala Ser Ile Met Phe Met  
230 235 240

Gln Ser Ile Asp	Ser Val Val Glu Phe	Cys Asn Glu Lys Thr His
245		255
Asn Gln Glu Ala	Pro Ser Leu Gln Asn	Ile Lys Cys Asn Phe Arg
260		270
Ser Thr Trp Glu	Val Ile Ser Asn Ser	Glu Asp Phe Lys Asn Thr
275		285
Ile Pro Met Val	Thr Pro Pro Pro Pro	Pro Val Phe Ser Leu Leu
290		300
Lys Ile Ser Gln	Arg Ile Val Cys Leu	Val Leu Asp Lys Ser Gly
305		315
Ser Met Gly Gly	Lys Asp Arg Leu Asn	Arg Met Asn Gln Ala Ala
320		330
Lys His Phe Leu	Leu Gln Thr Val Glu	Asn Gly Ser Trp Val Gly
335		345
Met Val His Phe	Asp Ser Thr Ala Thr	Ile Val Asn Lys Leu Ile
350		360
Gln Ile Lys Ser	Ser Asp Glu Arg Asn	Thr Leu Met Ala Gly Leu
365		375
Pro Thr Tyr Pro	Leu Gly Gly Thr Ser	Ile Cys Ser Gly Ile Lys
380		390
Tyr Ala Phe Gln	Val Ile Gly Glu Leu	His Ser Gln Leu Asp Gly
395		405
Ser Glu Val Leu	Leu Leu Thr Asp Gly	Glu Asp Asn Thr Ala Ser
410		420
Ser Cys Ile Asp	Glu Val Lys Gln Ser	Gly Ala Ile Val His Phe
425		435
Ile Ala Leu Gly	Arg Ala Ala Asp Glu	Ala Val Ile Glu Met Ser
440		450
Lys Ile Thr Gly	Gly Ser His Phe Tyr	Val Ser Asp Glu Ala Gln
455		465
Asn Asn Gly Leu	Ile Asp Ala Phe Gly	Ala Leu Thr Ser Gly Asn
470		480
Thr Asp Leu Ser	Gln Lys Ser Leu Gln	Leu Glu Ser Lys Gly Leu
485		495
Thr Leu Asn Ser	Asn Ala Trp Met Asn	Asp Thr Val Ile Ile Asp
500		510
Ser Thr Val Gly	Lys Asp Thr Phe Phe	Leu Ile Thr Trp Asn Ser
515		525



Leu	Pro	Pro	Ser	Ile	Ser	Leu	Trp	Asp	Pro	Ser	Gly	Thr	Ile	Met	530	535	540
Glu	Asn	Phe	Thr	Val	Asp	Ala	Thr	Ser	Lys	Met	Ala	Tyr	Leu	Ser	545	550	555
Ile	Pro	Gly	Thr	Ala	Lys	Val	Gly	Thr	Trp	Ala	Tyr	Asn	Leu	Gln	560	565	570
Ala	Lys	Ala	Asn	Pro	Glu	Thr	Leu	Thr	Ile	Thr	Val	Thr	Ser	Arg	575	580	585
Ala	Ala	Asn	Ser	Ser	Val	Pro	Pro	Ile	Thr	Val	Asn	Ala	Lys	Met	590	595	600
Asn	Lys	Asp	Val	Asn	Ser	Phe	Pro	Ser	Pro	Met	Ile	Val	Tyr	Ala	605	610	615
Glu	Ile	Leu	Gln	Gly	Tyr	Val	Pro	Val	Leu	Gly	Ala	Asn	Val	Thr	620	625	630
Ala	Phe	Ile	Glu	Ser	Gln	Asn	Gly	His	Thr	Glu	Val	Leu	Glu	Leu	635	640	645
Leu	Asp	Asn	Gly	Ala	Gly	Ala	Asp	Ser	Phe	Lys	Asn	Asp	Gly	Val	650	655	660
Tyr	Ser	Arg	Tyr	Phe	Thr	Ala	Tyr	Thr	Glu	Asn	Gly	Arg	Tyr	Ser	665	670	675
Leu	Lys	Val	Arg	Ala	His	Gly	Gly	Ala	Asn	Thr	Ala	Arg	Leu	Lys	680	685	690
Leu	Arg	Pro	Pro	Leu	Asn	Arg	Ala	Ala	Tyr	Ile	Pro	Gly	Trp	Val	695	700	705
Val	Asn	Gly	Glu	Ile	Glu	Ala	Asn	Pro	Pro	Arg	Pro	Glu	Ile	Asp	710	715	720
Glu	Asp	Thr	Gln	Thr	Thr	Leu	Glu	Asp	Phe	Ser	Arg	Thr	Ala	Ser	725	730	735
Gly	Gly	Ala	Phe	Val	Val	Ser	Gln	Val	Pro	Ser	Leu	Pro	Leu	Pro	740	745	750
Asp	Gln	Tyr	Pro	Pro	Ser	Gln	Ile	Thr	Asp	Leu	Asp	Ala	Thr	Val	755	760	765
His	Glu	Asp	Lys	Ile	Ile	Leu	Thr	Trp	Thr	Ala	Pro	Gly	Asp	Asn	770	775	780
Phe	Asp	Val	Gly	Lys	Val	Gln	Arg	Tyr	Ile	Ile	Arg	Ile	Ser	Ala	785	790	795
Ser	Ile	Leu	Asp	Leu	Arg	Asp	Ser	Phe	Asp	Asp	Ala	Leu	Gln	Val	800	805	810

Asn	Thr	Thr	Asp	Leu	Ser	Pro	Lys	Glu	Ala	Asn	Ser	Lys	Glu	Ser	
				815					820					825	
Phe	Ala	Phe	Lys	Pro	Glu	Asn	Ile	Ser	Glu	Glu	Asn	Ala	Thr	His	
				830					835					840	
Ile	Phe	Ile	Ala	Ile	Lys	Ser	Ile	Asp	Lys	Ser	Asn	Leu	Thr	Ser	
				845					850					855	
Lys	Val	Ser	Asn	Ile	Ala	Gln	Val	Thr	Leu	Phe	Ile	Pro	Gln	Ala	
				860					865					870	
Asn	Pro	Asp	Asp	Ile	Asp	Pro	Thr	Pro	Thr	Pro	Thr	Pro	Thr	Pro	
				875					880					885	
Thr	Pro	Asp	Lys	Ser	His	Asn	Ser	Gly	Val	Asn	Ile	Ser	Thr	Leu	
				890					895					900	
Val	Leu	Ser	Val	Ile	Gly	Ser	Val	Val	Ile	Val	Asn	Phe	Ile	Leu	
				905					910					915	

Ser Thr Thr Ile

<210> 71  
 <211> 3877  
 <212> DNA  
 <213> Homo Sapien

<400> 71  
 ctccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50  
 aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 100  
 ctctgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatttt 150  
 gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200  
 cccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250  
 gctccttcgg cttaacttgt ggttggagga gagaaccttt gtggggctgc 300  
 gttctcttag cagtgtcag aagtgacttg cctgaggggtg gaccagaaga 350  
 aaggaaaggt cccctcttgc tgttggtgc acatcaggaa ggctgtgatg 400  
 ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450  
 gcaagatcat cctttaaaag tagagaagct gctctgtgtg gtggttaact 500  
 ccaagaggca gaactcgttc tagaaggaaa tggatgcaag cagctccggg 550  
 ggccccaac gcatgcttcc tgtggtctag ccaggggaag cccttccgtg 600  
 ggggccccgg ctttgaggga tgccaccggt tctggacgca tggctgattc 650  
 ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tcccgggtgg 700

tggttttgct ggtgctcctc tgctgtgcta tctctgtcct gtacatgttg 750  
 gcctgcaccc caaaaggtga cgaggagcag ctggcactgc ccagggccaa 800  
 cagccccacg gggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850  
 agcagcaccg caactacgtg agcagcctga agcggcagat cgcacagctc 900  
 aaggaggagc tgcaggagag gagtgagcag ctcaggaatg ggcagtacca 950  
 agccagcgat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000  
 cccaggccga cctcctggcc ttctgcact cgcaggtgga caaggcagag 1050  
 gtgaatgctg gcgtcaagct ggccacagag tatgcagcag tgcctttcga 1100  
 tagctttact ctacagaagg tgtaccagct ggagactggc cttacccgcc 1150  
 accccgagga gaagcctgtg aggaaggaca agcgggatga gttggtggaa 1200 ...  
 gccattgaat cagccttgga gaccctgaac aatcctgcag agaacagccc 1250  
 caatcaccgt ccttacacgg cctctgattt catagaaggg atctaccgaa 1300  
 cagaaaggga caaagggaca ttgtatgagc tcaccttcaa aggggaccac 1350  
 aaacacgaat tcaaacggct catcttattt cgaccattca gccccatcat 1400  
 gaaagtgaaa aatgaaaagc tcaacatggc caacacgctt atcaatgtta 1450  
 tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500  
 ttcagggaga tgtgcattga gcaggatggg agagtccatc tctgtttgt 1550  
 ttacttttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600  
 cttccaaagc tgccaacttc aggaacttta cttcatcca gctgaatgga 1650  
 gaattttctc ggggaaaggg acttgatgtt ggagcccgct tctggaaggg 1700  
 aagcaacgct cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750  
 aattcctcaa tacgtgtagg ctgaatacac agccaggga gaaggtattt 1800  
 tatccagttc ttttcagtca gtacaatcct ggcataatat acggccacca 1850  
 tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaactg 1900  
 gattttgag agactttgga tttgggatga cgtgtcagta tcggtcagac 1950  
 ttcataata taggtgggtt tgatctggac atcaaaggct ggggcggaga 2000  
 ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtgttac 2050  
 ggacgcctgt gcgaggactc ttccacctct ggcatgagaa gcgctgcatg 2100  
 gacgagctga cccccgagca gtacaagatg tgcatgcagt ccaaggccat 2150

gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200  
tagaggctca ccttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250  
tgaactccca gagaaggatt gtgggagaca ctttttcttt ctttttgcaa 2300  
ttactgaaag tggctgcaac agagaaaaga cttccataaa ggacgacaaa 2350  
agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400  
tgggcttttt acaacagaaa tcaaaatctc cgctttgcct gcaaaagtaa 2450  
cccagttgca ccctgtgaag tgtctgacaa aggcagaatg cttgtgagat 2500  
tataagccta atggtgtgga ggttttgatg gtgtttacaa tacactgaga 2550  
cctgtttgtt tgtgtgctca ttgaaatatt catgatttaa gagcagtttt 2600  
gtaaaaaatt cattagcatg aaaggcaagc atatttctcc tcatatgaat 2650  
gagcctatca gcagggtctt agtttctagg aatgctaaaa tatcagaagg 2700  
caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750  
taaaatggac cagaaaagaa aagaaacat aaatatcgtg tcatattttc 2800  
cccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850  
ctgtctccgt ttttttcttt tatttaaaaa tgcacttttt ttcccttggtg 2900  
agttatagtc tgcttattta attaccactt tgcaagcctt acaagagagc 2950  
acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000  
ttatgagaac tttcagttca aagcatcaaa ttgatgccat atccaaggac 3050  
atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100  
gggaaggaat ggtttgtact aatacagacg tacagatact ttctctgaag 3150  
agtattttcg aagaggagca actgaacact ggaggaaaag aaaatgacac 3200  
tttctgcttt acagaaaagg aaactcatc agactggtga tatcgtgatg 3250  
tacctaaaag tcagaaacca ctttttctcc tcagaagtag ggaccgcttt 3300  
cttacctggt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350  
tttcaaaaca ggggtgtcct cctggcttct ggcttcata agaagaaatg 3400  
gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450  
ccagaatcta gtgggatgga agtttttgct acatgttatc caccacaggc 3500  
caggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550

accaagatgc ttctgaaaat tgcattttat taccatttca aactatTTTT 3600  
 taaaaataaa tacagttaac atagagtggg ttcttcattc atgtgaaaat 3650  
 tattagccag caccagatgc atgagctaata tatctctttg agtccttgct 3700  
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750  
 gctgttggtg tgtaaaaaa tgcattgtat tgatttgtac tggtagttta 3800  
 tgaaatttaa ttaaacaca ggccatgaat ggaaggtggg attgcacagc 3850  
 taataaaata tgatttgtgg atatgaa 3877

<210> 72  
 <211> 532  
 <212> PRT  
 <213> Homo Sapien

<400> 72  
 Met Met Met Val Arg Arg Gly Leu Leu Ala Trp Ile Ser Arg Val  
 1 5 10 15  
 Val Val Leu Leu Val Leu Leu Cys Cys Ala Ile Ser Val Leu Tyr  
 20 25 30  
 Met Leu Ala Cys Thr Pro Lys Gly Asp Glu Glu Gln Leu Ala Leu  
 35 40 45  
 Pro Arg Ala Asn Ser Pro Thr Gly Lys Glu Gly Tyr Gln Ala Val  
 50 55 60  
 Leu Gln Glu Trp Glu Glu Gln His Arg Asn Tyr Val Ser Ser Leu  
 65 70 75  
 Lys Arg Gln Ile Ala Gln Leu Lys Glu Glu Leu Gln Glu Arg Ser  
 80 85 90  
 Glu Gln Leu Arg Asn Gly Gln Tyr Gln Ala Ser Asp Ala Ala Gly  
 95 100 105  
 Leu Gly Leu Asp Arg Ser Pro Pro Glu Lys Thr Gln Ala Asp Leu  
 110 115 120  
 Leu Ala Phe Leu His Ser Gln Val Asp Lys Ala Glu Val Asn Ala  
 125 130 135  
 Gly Val Lys Leu Ala Thr Glu Tyr Ala Ala Val Pro Phe Asp Ser  
 140 145 150  
 Phe Thr Leu Gln Lys Val Tyr Gln Leu Glu Thr Gly Leu Thr Arg  
 155 160 165  
 His Pro Glu Glu Lys Pro Val Arg Lys Asp Lys Arg Asp Glu Leu  
 170 175 180  
 Val Glu Ala Ile Glu Ser Ala Leu Glu Thr Leu Asn Asn Pro Ala

				185					190					195
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile
				200					205					210
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu
				215					220					225
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile
				230					235					240
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys
				245					250					255
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala
				260					265					270
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu
				275					280					285
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr
				290					295					300
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn
				305					310					315
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu
				320					325					330
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg
				335					340					345
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp
				350					355					360
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr
				365					370					375
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr
				380					385					390
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu
				395					400					405
Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp
				410					415					420
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn
				425					430					435
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp
				440					445					450
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val
				455					460					465
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg

	470		475		480
Cys Met Asp Glu Leu Thr Pro Glu Gln Tyr Lys Met Cys Met Gln					
	485		490		495
Ser Lys Ala Met Asn Glu Ala Ser His Gly Gln Leu Gly Met Leu					
	500		505		510
Val Phe Arg His Glu Ile Glu Ala His Leu Arg Lys Gln Lys Gln					
	515		520		525
Lys Thr Ser Ser Lys Lys Thr					
	530				

<210> 73  
 <211> 1701  
 <212> DNA  
 <213> Homo Sapien  
 <220>  
 <221> unsure  
 <222> 1528  
 <223> unknown base

<400> 73  
 gagactgcag agggagataa agagagaggg caaagaggca gcaagagatt 50  
 tgtcctgggg atccagaaac ccatgatacc ctactgaaca ccgaatcccc 100  
 tggaagccca cagagacaga gacagcaaga gaagcagaga taaatacact 150  
 cacgccagga gctcgtcgc tctctctctc tctctctcac tcctccctcc 200  
 ctctctctct gcctgtccta gtcctctagt cctcaaattc ccagtcccct 250  
 gcaccccttc ctgggacact atgttggttct ccgccctcct gctggagggtg 300  
 atttggatcc tggctgcaga tgggggtcaa cactggacgt atgagggccc 350  
 acatggtcag gaccattggc cagcctctta ccctgagtgt ggaaacaatg 400  
 cccagtcgcc catcgatatt cagacagaca gtgtgacatt tgaccctgat 450  
 ttgcctgctc tgcagcccca cggatatgac cagcctggca ccgagccttt 500  
 ggacctgcac aacaatggcc acacagtgc actctctctg ccctctaccc 550  
 tgtatctggg tggacttccc cgaaaatatg tagctgcca gctccacctg 600  
 cactgggggtc agaaaggatc ccagggggg tcagaacacc agatcaacag 650  
 tgaagccaca tttgcagagc tccacattgt acattatgac tctgattcct 700  
 atgacagctt gagtgaggct gctgagaggc ctcagggcct ggctgtcctg 750  
 ggcacccctaa ttgaggtggg tgagactaag aatatagctt atgaacacat 800  
 tctgagtcac ttgcatgaag tcaggcataa agatcagaag acctcagtgc 850

ctcccttcaa cctaagagag ctgctcccca aacagctggg gcagtacttc 900  
 cgctacaatg gctcgctcac aactccccct tgctaccaga gtgtgctctg 950  
 gacagttttt tatagaaggt cccagatttc aatggaacag ctggaaaagc 1000  
 ttcaggggac attgttctcc acagaagagg agccctctaa gcttctggta 1050  
 cagaactacc gagcccttca gcctctcaat cagcgcatgg tctttgcttc 1100  
 tttcatccaa gcaggatcct cgtataccac aggtgaaatg ctgagtctag 1150  
 gtgtaggaat cttggttggc tgtctctgcc ttctcctggc tgtttatttc 1200  
 attgctagaa agattcggaa gaagaggctg gaaaaccgaa agagtgtggt 1250  
 cttcacctca gcacaagcca cgactgaggc ataaattcct tctcagatac 1300  
 catggatgtg gatgacttcc cttcatgcct atcaggaagc ctctaaaatg 1350  
 ggggtgtagga tctggccaga aacactgtag gagtagtaag cagatgtcct 1400  
 ccttcccctg gacatctctt agagaggaat ggaccaggc tgtcattcca 1450  
 ggaagaactg cagagccttc agcctctcca aacatgtagg aggaaatgag 1500  
 gaaatcgctg tgttggtaat gcagaganca aactctgttt agttgcaggg 1550  
 gaagtttggg atatacccca aagtcctcta cccctcact tttatggccc 1600  
 tttccctaga tatactgcyg gatctctcct taggataaag agttgctggt 1650  
 gaagttgtat atttttgatc aatatatttg gaaattaaag tttctgactt 1700  
 t 1701

<210> 74  
 <211> 337  
 <212> PRT  
 <213> Homo Sapien

<400> 74  
 Met Leu Phe Ser Ala Leu Leu Leu Glu Val Ile Trp Ile Leu Ala  
 1 5 10 15  
 Ala Asp Gly Gly Gln His Trp Thr Tyr Glu Gly Pro His Gly Gln  
 20 25 30  
 Asp His Trp Pro Ala Ser Tyr Pro Glu Cys Gly Asn Asn Ala Gln  
 35 40 45  
 Ser Pro Ile Asp Ile Gln Thr Asp Ser Val Thr Phe Asp Pro Asp  
 50 55 60  
 Leu Pro Ala Leu Gln Pro His Gly Tyr Asp Gln Pro Gly Thr Glu  
 65 70 75



Pro	Leu	Asp	Leu	His	Asn	Asn	Gly	His	Thr	Val	Gln	Leu	Ser	Leu		80	85	90
Pro	Ser	Thr	Leu	Tyr	Leu	Gly	Gly	Leu	Pro	Arg	Lys	Tyr	Val	Ala		95	100	105
Ala	Gln	Leu	His	Leu	His	Trp	Gly	Gln	Lys	Gly	Ser	Pro	Gly	Gly		110	115	120
Ser	Glu	His	Gln	Ile	Asn	Ser	Glu	Ala	Thr	Phe	Ala	Glu	Leu	His		125	130	135
Ile	Val	His	Tyr	Asp	Ser	Asp	Ser	Tyr	Asp	Ser	Leu	Ser	Glu	Ala		140	145	150
Ala	Glu	Arg	Pro	Gln	Gly	Leu	Ala	Val	Leu	Gly	Ile	Leu	Ile	Glu		155	160	165
Val	Gly	Glu	Thr	Lys	Asn	Ile	Ala	Tyr	Glu	His	Ile	Leu	Ser	His		170	175	180
Leu	His	Glu	Val	Arg	His	Lys	Asp	Gln	Lys	Thr	Ser	Val	Pro	Pro		185	190	195
Phe	Asn	Leu	Arg	Glu	Leu	Leu	Pro	Lys	Gln	Leu	Gly	Gln	Tyr	Phe		200	205	210
Arg	Tyr	Asn	Gly	Ser	Leu	Thr	Thr	Pro	Pro	Cys	Tyr	Gln	Ser	Val		215	220	225
Leu	Trp	Thr	Val	Phe	Tyr	Arg	Arg	Ser	Gln	Ile	Ser	Met	Glu	Gln		230	235	240
Leu	Glu	Lys	Leu	Gln	Gly	Thr	Leu	Phe	Ser	Thr	Glu	Glu	Glu	Pro		245	250	255
Ser	Lys	Leu	Leu	Val	Gln	Asn	Tyr	Arg	Ala	Leu	Gln	Pro	Leu	Asn		260	265	270
Gln	Arg	Met	Val	Phe	Ala	Ser	Phe	Ile	Gln	Ala	Gly	Ser	Ser	Tyr		275	280	285
Thr	Thr	Gly	Glu	Met	Leu	Ser	Leu	Gly	Val	Gly	Ile	Leu	Val	Gly		290	295	300
Cys	Leu	Cys	Leu	Leu	Leu	Ala	Val	Tyr	Phe	Ile	Ala	Arg	Lys	Ile		305	310	315
Arg	Lys	Lys	Arg	Leu	Glu	Asn	Arg	Lys	Ser	Val	Val	Phe	Thr	Ser		320	325	330
Ala	Gln	Ala	Thr	Thr	Glu	Ala										335		

<210> 75  
 <211> 1743  
 <212> DNA

<213> Homo Sapien

<400> 75

```
tgccgctgcc gccgctgctg ctgttgctcc tggcggcgcc ttggggacgg 50
gcagttccct gtgtctctg tggtttgcc aaacctgcaa acatcacctt 100
cttatccatc aacatgaaga atgtcctaca atggactcca ccagaggggc 150
ttcaaggagt taaagttact tacactgtgc agtatttcat cacaaattgg 200
cccaccagag gtggcactga ctacagatga gaagtccatt tctgttgctc 250
tgacagctcc agagaagtgg aagagaaatc cagaagacct tcctgtttcc 300
atgcaacaaa tatactccaa tctgaagtat aacgtgtctg tgttgaatac 350
taaatacaaac agaacgtggc ccagtggtg gaccaaccac acgctgggtg 400
tcacctggct ggagccgaac actctttact gcgtacacgt ggagtccttc 450
gtcccagggc ccctcgccg tgcctcagct tctgagaagc agtgtgccag 500
gactttgaaa gatcaatcat cagagttcaa ggctaaaatc atcttctggt 550
atgttttgcc catatctatt accgtgtttc tttttctgt gatgggctat 600
tccatctacc gatatatcca cgttggcaaa gagaaacacc cagcaaattt 650
gattttgatt tatggaaatg aatttgacaa aagattcttt gtgcctgctg 700
aaaaaatcgt gattaacttt atcacctca atatctcgga tgattctaaa 750
atttctcatc aggatatgag ttactggga aaaagcagtg atgtatccag 800
ccttaatgat cctcagccca gcgggaacct gaggccccct caggaggaag 850
aggaggtgaa acatttaggg tatgcttcgc atttgatgga aattttttgt 900
gactctgaag aaaacacgga aggtacttct ctcaccagc aagagtcctt 950
cagcagaaca atacccccgg ataaaacagt cattgaatat gaatatgatg 1000
tcagaaccac tgacatttgt gcggggcctg aagagcagga gctcagtttg 1050
caggaggagg tgtccacaca aggaacatta ttggagtcgc aggcagcggt 1100
ggcagtcttg ggcccgcaaa cgttacagta ctcatacacc cctcagctcc 1150
aagacttaga cccctggcg caggagcaca cagactcgga ggaggggccc 1200
gaggaagagc catcgacgac cctggtcgac tgggatcccc aaactggcag 1250
gctgtgtatt ccttcgctgt ccagcttcga ccaggattca gagggctgcg 1300
agccttctga gggggatggg ctcgagagg aggtcttct atctagactc 1350
```

tatgaggagc cggctccaga caggccacca ggagaaaatg aaacctatct 1400  
catgcaattc atggaggaat ggggggttata tgtgcagatg gaaaactgat 1450  
gccaacactt ccttttgcct tttgtttcct gtgcaaacia gtgagtcacc 1500  
cctttgatcc cagccataaa gtacctggga tgaaagaagt tttttccagt 1550  
ttgtcagtgt ctgtgagaat tacttatttc ttttctctat tctcatagca 1600  
cgtgtgtgat tggttcatgc atgtaggtct cttacaatg atggtgggcc 1650  
tctggagtcc aggggctggc cggttgttct atgcagagaa agcagtcaat 1700  
aaatgtttgc cagactgggt gcagaattta ttcaggtggg tgt 1743

<210> 76  
<211> 442  
<212> PRT  
<213> Homo Sapien

<400> 76  
Met Ser Tyr Asn Gly Leu His Gln Arg Val Phe Lys Glu Leu Lys  
1 5 10 15  
Leu Leu Thr Leu Cys Ser Ile Ser Ser Gln Ile Gly Pro Pro Glu  
20 25 30  
Val Ala Leu Thr Thr Asp Glu Lys Ser Ile Ser Val Val Leu Thr  
35 40 45  
Ala Pro Glu Lys Trp Lys Arg Asn Pro Glu Asp Leu Pro Val Ser  
50 55 60  
Met Gln Gln Ile Tyr Ser Asn Leu Lys Tyr Asn Val Ser Val Leu  
65 70 75  
Asn Thr Lys Ser Asn Arg Thr Trp Ser Gln Cys Val Thr Asn His  
80 85 90  
Thr Leu Val Leu Thr Trp Leu Glu Pro Asn Thr Leu Tyr Cys Val  
95 100 105  
His Val Glu Ser Phe Val Pro Gly Pro Pro Arg Arg Ala Gln Pro  
110 115 120  
Ser Glu Lys Gln Cys Ala Arg Thr Leu Lys Asp Gln Ser Ser Glu  
125 130 135  
Phe Lys Ala Lys Ile Ile Phe Trp Tyr Val Leu Pro Ile Ser Ile  
140 145 150  
Thr Val Phe Leu Phe Ser Val Met Gly Tyr Ser Ile Tyr Arg Tyr  
155 160 165  
Ile His Val Gly Lys Glu Lys His Pro Ala Asn Leu Ile Leu Ile  
170 175 180

Tyr	Gly	Asn	Glu	Phe	Asp	Lys	Arg	Phe	Phe	Val	Pro	Ala	Glu	Lys	185	190	195
Ile	Val	Ile	Asn	Phe	Ile	Thr	Leu	Asn	Ile	Ser	Asp	Asp	Ser	Lys	200	205	210
Ile	Ser	His	Gln	Asp	Met	Ser	Leu	Leu	Gly	Lys	Ser	Ser	Asp	Val	215	220	225
Ser	Ser	Leu	Asn	Asp	Pro	Gln	Pro	Ser	Gly	Asn	Leu	Arg	Pro	Pro	230	235	240
Gln	Glu	Glu	Glu	Glu	Val	Lys	His	Leu	Gly	Tyr	Ala	Ser	His	Leu	245	250	255
Met	Glu	Ile	Phe	Cys	Asp	Ser	Glu	Glu	Asn	Thr	Glu	Gly	Thr	Ser	260	265	270
Leu	Thr	Gln	Gln	Glu	Ser	Leu	Ser	Arg	Thr	Ile	Pro	Pro	Asp	Lys	275	280	285
Thr	Val	Ile	Glu	Tyr	Glu	Tyr	Asp	Val	Arg	Thr	Thr	Asp	Ile	Cys	290	295	300
Ala	Gly	Pro	Glu	Glu	Gln	Glu	Leu	Ser	Leu	Gln	Glu	Glu	Val	Ser	305	310	315
Thr	Gln	Gly	Thr	Leu	Leu	Glu	Ser	Gln	Ala	Ala	Leu	Ala	Val	Leu	320	325	330
Gly	Pro	Gln	Thr	Leu	Gln	Tyr	Ser	Tyr	Thr	Pro	Gln	Leu	Gln	Asp	335	340	345
Leu	Asp	Pro	Leu	Ala	Gln	Glu	His	Thr	Asp	Ser	Glu	Glu	Gly	Pro	350	355	360
Glu	Glu	Glu	Pro	Ser	Thr	Thr	Leu	Val	Asp	Trp	Asp	Pro	Gln	Thr	365	370	375
Gly	Arg	Leu	Cys	Ile	Pro	Ser	Leu	Ser	Ser	Phe	Asp	Gln	Asp	Ser	380	385	390
Glu	Gly	Cys	Glu	Pro	Ser	Glu	Gly	Asp	Gly	Leu	Gly	Glu	Glu	Gly	395	400	405
Leu	Leu	Ser	Arg	Leu	Tyr	Glu	Glu	Pro	Ala	Pro	Asp	Arg	Pro	Pro	410	415	420
Gly	Glu	Asn	Glu	Thr	Tyr	Leu	Met	Gln	Phe	Met	Glu	Glu	Trp	Gly	425	430	435
Leu	Tyr	Val	Gln	Met	Glu	Asn									440		

<210> 77  
 <211> 1636  
 <212> DNA

<213> Homo Sapien

<400> 77

```
gaggagcggg ccgaggactc cagcgtgccc aggtctggca tcctgcactt 50
gctgccctct gacacctggg aagatggccg gcccgtggac cttcaccctt 100
ctctgtgggt tgctggcagc caccttgatc caagccaccc tcagtcccac 150
tgcagttctc atcctcggcc caaaagtcac caaagaaaag ctgacacagg 200
agctgaagga ccacaacgcc accagcatcc tgcagcagct gccgctgctc 250
agtgccatgc gggaaaagcc agccggaggc atccctgtgc tgggcagcct 300
ggtgaacacc gtcctgaagc acatcatctg gctgaaggtc atcacagcta 350
acatcctcca gctgcagggtg aagccctcgg ccaatgacca ggagctgcta 400
gtcaagatcc ccttggacat ggtggctgga ttcaacacgc ccttgggtcaa 450
gaccatcgtg gagttccaca tgacgactga ggcccaagcc accatccgca 500
tggacaccag tgcaagtggc cccaccgcgc tggtcctcag tgactgtgcc 550
accagccatg ggagcctgcg catccaactg ctgtataagc tctccttctt 600
ggtgaacgcc ttagctaagc aggtcatgaa cctcctagtg ccatccctgc 650
ccaatctagt gaaaaaccag ctgtgtcccg tgatcgaggc ttccttcaat 700
ggcatgtatg cagacctcct gcagctggtg aagggtgcca tttccctcag 750
cattgaccgt ctggagtttg accttctgta tcctgccatc aagggtgaca 800
ccattcagct ctacctgggg gccaaagttgt tggactcaca gggaaagggtg 850
accaagtggg tcaataactc tgcagcttcc ctgacaatgc ccaccctgga 900
caacatcccc ttcagcctca tcgtgagtca ggacgtggtg aaagctgcag 950
tggctgctgt gctctctcca gaagaattca tggtcctggt ggactctgtg 1000
cttcctgaga gtgcccatcg gctgaagtca agcatcgggc tgatcaatga 1050
aaaggctgca gataagctgg gatctaccca gatcgtgaag atcctaactc 1100
aggacactcc cgagtttttt atagaccaag gccatgccaa ggtggcccaa 1150
ctgatcgtgc tggaaagtgt tccctccagt gaagccctcc gccctttgtt 1200
caccctgggc atcgaagcca gctcggaagc tcagttttac accaaagggtg 1250
accaacttat actcaacttg aataacatca gctctgatcg gatccagctg 1300
atgaactctg ggattggctg gttccaacct gatgttctga aaaacatcat 1350
cactgagatc atccactcca tcctgctgcc gaaccagaat ggcaaattaa 1400
```

gatctgggggt cccagtgtca ttggtgaagg ccttgggatt cgaggcagct 1450  
gagtcctcac tgaccaagga tgcccttgtg cttactccag cctccttgtg 1500  
gaaaccagc tctcctgtct cccagtgaag acttggtatgg cagccatcag 1550  
ggaaggctgg gtcccagctg ggagtatggg tgtgagctct atagaccatc 1600  
cctctctgca atcaataaac acttgctgtg gaaaaa 1636

<210> 78  
<211> 484  
<212> PRT  
<213> Homo Sapien

<400> 78  
Met Ala Gly Pro Trp Thr Phe Thr Leu Leu Cys Gly Leu Leu Ala  
1 5 10 15  
Ala Thr Leu Ile Gln Ala Thr Leu Ser Pro Thr Ala Val Leu Ile  
20 25 30  
Leu Gly Pro Lys Val Ile Lys Glu Lys Leu Thr Gln Glu Leu Lys  
35 40 45  
Asp His Asn Ala Thr Ser Ile Leu Gln Gln Leu Pro Leu Leu Ser  
50 55 60  
Ala Met Arg Glu Lys Pro Ala Gly Gly Ile Pro Val Leu Gly Ser  
65 70 75  
Leu Val Asn Thr Val Leu Lys His Ile Ile Trp Leu Lys Val Ile  
80 85 90  
Thr Ala Asn Ile Leu Gln Leu Gln Val Lys Pro Ser Ala Asn Asp  
95 100 105  
Gln Glu Leu Leu Val Lys Ile Pro Leu Asp Met Val Ala Gly Phe  
110 115 120  
Asn Thr Pro Leu Val Lys Thr Ile Val Glu Phe His Met Thr Thr  
125 130 135  
Glu Ala Gln Ala Thr Ile Arg Met Asp Thr Ser Ala Ser Gly Pro  
140 145 150  
Thr Arg Leu Val Leu Ser Asp Cys Ala Thr Ser His Gly Ser Leu  
155 160 165  
Arg Ile Gln Leu Leu Tyr Lys Leu Ser Phe Leu Val Asn Ala Leu  
170 175 180  
Ala Lys Gln Val Met Asn Leu Leu Val Pro Ser Leu Pro Asn Leu  
185 190 195  
Val Lys Asn Gln Leu Cys Pro Val Ile Glu Ala Ser Phe Asn Gly

	200		205		210
Met Tyr Ala Asp	Leu Leu Gln Leu Val	Lys Val Pro Ile Ser	Leu		
	215	220	225		
Ser Ile Asp Arg	Leu Glu Phe Asp Leu	Leu Tyr Pro Ala Ile	Lys		
	230	235	240		
Gly Asp Thr Ile	Gln Leu Tyr Leu Gly	Ala Lys Leu Leu Asp	Ser		
	245	250	255		
Gln Gly Lys Val	Thr Lys Trp Phe Asn	Asn Ser Ala Ala Ser	Leu		
	260	265	270		
Thr Met Pro Thr	Leu Asp Asn Ile Pro	Phe Ser Leu Ile Val	Ser		
	275	280	285		
Gln Asp Val Val	Lys Ala Ala Val Ala	Ala Val Leu Ser Pro	Glu		
	290	295	300		
Glu Phe Met Val	Leu Leu Asp Ser Val	Leu Pro Glu Ser Ala	His		
	305	310	315		
Arg Leu Lys Ser	Ser Ile Gly Leu Ile	Asn Glu Lys Ala Ala	Asp		
	320	325	330		
Lys Leu Gly Ser	Thr Gln Ile Val Lys	Ile Leu Thr Gln Asp	Thr		
	335	340	345		
Pro Glu Phe Phe	Ile Asp Gln Gly His	Ala Lys Val Ala Gln	Leu		
	350	355	360		
Ile Val Leu Glu	Val Phe Pro Ser Ser	Glu Ala Leu Arg Pro	Leu		
	365	370	375		
Phe Thr Leu Gly	Ile Glu Ala Ser Ser	Glu Ala Gln Phe Tyr	Thr		
	380	385	390		
Lys Gly Asp Gln	Leu Ile Leu Asn Leu	Asn Asn Ile Ser Ser	Asp		
	395	400	405		
Arg Ile Gln Leu	Met Asn Ser Gly Ile	Gly Trp Phe Gln Pro	Asp		
	410	415	420		
Val Leu Lys Asn	Ile Ile Thr Glu Ile	Ile His Ser Ile Leu	Leu		
	425	430	435		
Pro Asn Gln Asn	Gly Lys Leu Arg Ser	Gly Val Pro Val Ser	Leu		
	440	445	450		
Val Lys Ala Leu	Gly Phe Glu Ala Ala	Glu Ser Ser Leu Thr	Lys		
	455	460	465		
Asp Ala Leu Val	Leu Thr Pro Ala Ser	Leu Trp Lys Pro Ser	Ser		
	470	475	480		
Pro Val Ser Gln					

<210> 79  
<211> 1475  
<212> DNA  
<213> Homo Sapien

<400> 79  
gagagaagtc agcctggcag agagactctg aaatgaggga ttagaggtgt 50  
tcaaggagca agagcttcag cctgaagaca agggagcagt ccctgaagac 100  
gcttctactg agaggtctgc catggcctct cttggcctcc aacttgtggg 150  
ctacatccta ggccttctgg ggcttttggg cacactgggt gccatgctgc 200  
tccccagctg gaaaacaagt tcttatgtcg gtgccagcat tgtgacagca 250  
gttggcttct ccaagggcct ctggatggaa tgtgccacac acagcacagg 300  
catcacccag tgtgacatct atagcacctt tctgggcctg cccgctgaca 350  
tccaggctgc ccaggccatg atggtgacat ccagtgcaat ctctccctg 400  
gcctgcatta tctctgtggt gggcatgaga tgcacagtct tctgccagga 450  
atcccagacc aaagacagag tggcggtagc aggtggagtc tttttcatcc 500  
ttggaggcct cctgggatcc attcctgttg cctggaatct tcatgggatc 550  
ctacgggact tctactcacc actggtgcct gacagcatga aatttgagat 600  
tgagagaggc ctttacttgg gcattatttc ttccctgttc tccctgatag 650  
ctggaatcat cctctgcttt tctgtctcat cccagagaaa tcgctccaac 700  
tactacgatg cctaccaagc ccaacctctt gccacaagga gctctccaag 750  
gcctggtcaa cctcccaaag tcaagagtga gttcaattcc tacagcctga 800  
cagggtatgt gtgaagaacc aggggccaga gctggggggg ggctgggtct 850  
gtgaaaaaca gtggacagca ccccgagggc cacaggtgag ggacactacc 900  
actggatcgt gtcagaaggc gctgctgagg atagactgac tttggccatt 950  
ggattgagca aaggcagaaa tgggggctag tgtaacagca tgcaggttga 1000  
attgccaagg atgctcgcca tgccagcctt tctgttttcc tcaccttgct 1050  
gctcccctgc cctaagtccc caacctcaa cttgaaacct cattccctta 1100  
agccaggact cagaggatcc ctttgcctc tggtttacct gggactccat 1150  
ccccaaacct actaatcaca tccactgac tgaccctctg tgatcaaaga 1200  
ccctctctct ggctgaggtt ggctcttagc tcattgctgg ggatgggaag 1250



gagaagcagt ggcttttgtg ggcattgctc taacctactt ctcaagcttc 1300  
 cctccaaaga aactgattgg ccctggaacc tccatccac tcttggtatg 1350  
 actccacagt gtccagacta atttgtgcat gaactgaaat aaaaccatcc 1400  
 tacggtatcc agggaacaga aagcaggatg caggatggga ggacaggaag 1450  
 gcagcctggg acatttaaaa aaata 1475

<210> 80  
 <211> 230  
 <212> PRT  
 <213> Homo Sapien

<400> 80  
 Met Ala Ser Leu Gly Leu Gln Leu Val Gly Tyr Ile Leu Gly Leu  
     1                    5                    10                    15  
 Leu Gly Leu Leu Gly Thr Leu Val Ala Met Leu Leu Pro Ser Trp  
                     20                    25                    30  
 Lys Thr Ser Ser Tyr Val Gly Ala Ser Ile Val Thr Ala Val Gly  
                     35                    40                    45  
 Phe Ser Lys Gly Leu Trp Met Glu Cys Ala Thr His Ser Thr Gly  
                     50                    55                    60  
 Ile Thr Gln Cys Asp Ile Tyr Ser Thr Leu Leu Gly Leu Pro Ala  
                     65                    70                    75  
 Asp Ile Gln Ala Ala Gln Ala Met Met Val Thr Ser Ser Ala Ile  
                     80                    85                    90  
 Ser Ser Leu Ala Cys Ile Ile Ser Val Val Gly Met Arg Cys Thr  
                     95                    100                    105  
 Val Phe Cys Gln Glu Ser Arg Ala Lys Asp Arg Val Ala Val Ala  
                     110                    115                    120  
 Gly Gly Val Phe Phe Ile Leu Gly Gly Leu Leu Gly Phe Ile Pro  
                     125                    130                    135  
 Val Ala Trp Asn Leu His Gly Ile Leu Arg Asp Phe Tyr Ser Pro  
                     140                    145                    150  
 Leu Val Pro Asp Ser Met Lys Phe Glu Ile Gly Glu Ala Leu Tyr  
                     155                    160                    165  
 Leu Gly Ile Ile Ser Ser Leu Phe Ser Leu Ile Ala Gly Ile Ile  
                     170                    175                    180  
 Leu Cys Phe Ser Cys Ser Ser Gln Arg Asn Arg Ser Asn Tyr Tyr  
                     185                    190                    195  
 Asp Ala Tyr Gln Ala Gln Pro Leu Ala Thr Arg Ser Ser Pro Arg  
                     200                    205                    210

Pro Gly Gln Pro Pro Lys Val Lys Ser Glu Phe Asn Ser Tyr Ser  
 215 220 225

Leu Thr Gly Tyr Val  
 230

<210> 81  
 <211> 1732  
 <212> DNA  
 <213> Homo Sapien

<400> 81  
 cccacgcgtc cgcgcctctc ccttctgctg gaccttcctt cgtctctcca 50  
 tctctccctc ctttccccgc gttctctttc cacctttctc ttcttccac 100  
 cttagacctc ccttctgcc ctctttcct gccaccgct gcttctggc 150  
 ccttctccga ccccgctcta gcagcagacc tcttggggtc tgtgggttga 200  
 tctgtggccc ctgtgcctcc gtgtcctttt cgtctccctt cctcccgact 250  
 ccgctcccgg accagcggcc tgacctggg gaaaggatgg ttcccaggt 300  
 gagggctctc tctccttgc tgggactcgc gctgctctgg ttccccctgg 350  
 actcccacgc tcgagcccgc ccagacatgt tctgcctttt ccatgggaag 400  
 agatactccc ccggcgagag ctggcacccc tacttgagc cacaaggcct 450  
 gatgtactgc ctgcgtgta cctgctcaga gggcgcccat gtgagttgtt 500  
 accgcctcca ctgtccgcct gtccactgcc cccagcctgt gacggagcca 550  
 cagcaatgct gtcccaagtg tgtggaacct cacactccct ctggactccg 600  
 ggccccacca aagtctgcc agcacaacgg gaccatgtac caacacggag 650  
 agatcttcag tgcccatgag ctgttccct cccgcctgcc caaccagtgt 700  
 gtctctgca gctgcacaga gggccagatc tactgcggcc tcacaacctg 750  
 cccgaacca ggctgccag caccctccc actgccagac tctgctgcc 800  
 aagcctgcaa agatgaggca agtgagcaat cggatgaaga ggacagtgtg 850  
 cagtcgtcc atggggtgag acatcctcag gatccatgtt ccagtgatgc 900  
 tgggagaaag agaggcccgg gcaccccagc cccactggc ctgagcgccc 950  
 ctctgagctt catccctcgc cacttcagac ccaagggagc aggcagcaca 1000  
 actgtcaaga tcgtcctgaa ggagaaacat aagaaagcct gtgtgcatgg 1050  
 cgggaagacg tactccacg gggaggtgtg gcacccggcc ttccgtgcct 1100  
 tcggcccctt gccctgcac ctatgcacct gtgaggatgg ccgccaggac 1150

tgccagcgtg tgacctgtcc caccgagtac ccctgccgtc accccgagaa 1200  
 agtggctggg aagtgtgca agatttgccc agaggacaaa gcagaccctg 1250  
 gccacagtga gatcagttct accaggtgtc ccaaggcacc gggccgggtc 1300  
 ctcgtccaca catcggtatc cccaagccca gacaacctgc gtcgctttgc 1350  
 cctggaacac gaggcctcgg acttggtgga gatctacctc tggaagctgg 1400  
 taaaagatga ggaaactgag gctcagagag gtgaagtacc tggcccaagg 1450  
 ccacacagcc agaatcttcc acttgactca gatcaagaaa gtcaggaagc 1500  
 aagacttcca gaaagaggca cagcacttcc gactgctcgc tggcccccac 1550  
 gaaggtcact ggaacgtctt cctagcccag accctggagc tgaaggtcac 1600  
 ggccagtcca gacaaagtga ccaagacata acaaagacct aacagttgca 1650  
 gatatgagct gtataattgt tgttattata tattaataaa taagaagttg 1700  
 cattaccctc aaaaaaaaaa aaaaaaaaaa aa 1732

<210> 82  
 <211> 451  
 <212> PRT  
 <213> Homo Sapien

<400> 82  
 Met Val Pro Glu Val Arg Val Leu Ser Ser Leu Leu Gly Leu Ala  
 1 5 10 15  
 Leu Leu Trp Phe Pro Leu Asp Ser His Ala Arg Ala Arg Pro Asp  
 20 25 30  
 Met Phe Cys Leu Phe His Gly Lys Arg Tyr Ser Pro Gly Glu Ser  
 35 40 45  
 Trp His Pro Tyr Leu Glu Pro Gln Gly Leu Met Tyr Cys Leu Arg  
 50 55 60  
 Cys Thr Cys Ser Glu Gly Ala His Val Ser Cys Tyr Arg Leu His  
 65 70 75  
 Cys Pro Pro Val His Cys Pro Gln Pro Val Thr Glu Pro Gln Gln  
 80 85 90  
 Cys Cys Pro Lys Cys Val Glu Pro His Thr Pro Ser Gly Leu Arg  
 95 100 105  
 Ala Pro Pro Lys Ser Cys Gln His Asn Gly Thr Met Tyr Gln His  
 110 115 120  
 Gly Glu Ile Phe Ser Ala His Glu Leu Phe Pro Ser Arg Leu Pro  
 125 130 135

Asn	Gln	Cys	Val	Leu	Cys	Ser	Cys	Thr	Glu	Gly	Gln	Ile	Tyr	Cys		140	145	150
Gly	Leu	Thr	Thr	Cys	Pro	Glu	Pro	Gly	Cys	Pro	Ala	Pro	Leu	Pro		155	160	165
Leu	Pro	Asp	Ser	Cys	Cys	Gln	Ala	Cys	Lys	Asp	Glu	Ala	Ser	Glu		170	175	180
Gln	Ser	Asp	Glu	Glu	Asp	Ser	Val	Gln	Ser	Leu	His	Gly	Val	Arg		185	190	195
His	Pro	Gln	Asp	Pro	Cys	Ser	Ser	Asp	Ala	Gly	Arg	Lys	Arg	Gly		200	205	210
Pro	Gly	Thr	Pro	Ala	Pro	Thr	Gly	Leu	Ser	Ala	Pro	Leu	Ser	Phe		215	220	225
Ile	Pro	Arg	His	Phe	Arg	Pro	Lys	Gly	Ala	Gly	Ser	Thr	Thr	Val		230	235	240
Lys	Ile	Val	Leu	Lys	Glu	Lys	His	Lys	Lys	Ala	Cys	Val	His	Gly		245	250	255
Gly	Lys	Thr	Tyr	Ser	His	Gly	Glu	Val	Trp	His	Pro	Ala	Phe	Arg		260	265	270
Ala	Phe	Gly	Pro	Leu	Pro	Cys	Ile	Leu	Cys	Thr	Cys	Glu	Asp	Gly		275	280	285
Arg	Gln	Asp	Cys	Gln	Arg	Val	Thr	Cys	Pro	Thr	Glu	Tyr	Pro	Cys		290	295	300
Arg	His	Pro	Glu	Lys	Val	Ala	Gly	Lys	Cys	Cys	Lys	Ile	Cys	Pro		305	310	315
Glu	Asp	Lys	Ala	Asp	Pro	Gly	His	Ser	Glu	Ile	Ser	Ser	Thr	Arg		320	325	330
Cys	Pro	Lys	Ala	Pro	Gly	Arg	Val	Leu	Val	His	Thr	Ser	Val	Ser		335	340	345
Pro	Ser	Pro	Asp	Asn	Leu	Arg	Arg	Phe	Ala	Leu	Glu	His	Glu	Ala		350	355	360
Ser	Asp	Leu	Val	Glu	Ile	Tyr	Leu	Trp	Lys	Leu	Val	Lys	Asp	Glu		365	370	375
Glu	Thr	Glu	Ala	Gln	Arg	Gly	Glu	Val	Pro	Gly	Pro	Arg	Pro	His		380	385	390
Ser	Gln	Asn	Leu	Pro	Leu	Asp	Ser	Asp	Gln	Glu	Ser	Gln	Glu	Ala		395	400	405
Arg	Leu	Pro	Glu	Arg	Gly	Thr	Ala	Leu	Pro	Thr	Ala	Arg	Trp	Pro		410	415	420

Pro Arg Arg Ser Leu Glu Arg Leu Pro Ser Pro Asp Pro Gly Ala  
425 430 435

Glu Gly His Gly Gln Ser Arg Gln Ser Asp Gln Asp Ile Thr Lys  
440 445 450

Thr

<210> 83

<211> 2052

<212> DNA

<213> Homo Sapien

<400> 83

gacagctgtg tctcgatgga gtagactctc agaacagcgc agtttgccct 50  
ccgctcacgc agagcctctc cgtggcttcc gcaccttgag cattaggcca 100  
gttctcctct tctctctaata ccatccgtca cctctcctgt catccgtttc 150  
catgccgtga ggtccattca cagaacacat ccatggctct catgctcagt 200  
ttggttctga gtctcctcaa gctgggatca gggcagtggc aggtgtttgg 250  
gccagacaag cctgtccagg ccttggtggg ggaggacgca gcattctcct 300  
gtttcctgtc tcctaagacc aatgcagagg ccatggaagt gcggttcttc 350  
aggggccagt tctctagcgt ggtccacctc tacagggacg ggaaggacca 400  
gccatttatg cagatgccac agtatcaagg caggacaaaa ctggtgaagg 450  
attctattgc ggagggggcg atctctctga ggctggaaaa cattactgtg 500  
ttggatgctg gcctctatgg gtgcaggatt agttcccagt cttactacca 550  
gaaggccatc tgggagctac aggtgtcagc actgggctca gttcctctca 600  
tttccatcac gggatatgtt gatagagaca tccagctact ctgtcagtcc 650  
tcgggctggt tccccggcc cacagcgaag tggaaaggtc cacaaggaca 700  
ggatttgctc acagactcca ggacaaacag agacatgcat ggctgtttg 750  
atgtggagat ctctctgacc gtccaagaga acgccgggag catatcctgt 800  
tccatgcggc atgctcatct gagccgagag gtggaatcca gggtagagat 850  
aggagatacc tttttcgagc ctatatcgtg gcacctggct accaaagtac 900  
tggaataact ctgctgtggc ctatTTTTTg gcattgttgg actgaagatt 950  
ttcttctcca aattccagtg gaaaatccag gcggaactgg actggagaag 1000  
aaagcacgga caggcagaat tgagagacgc ccggaaacac gcagtggagg 1050

tgactctgga tccagagacg gctcaccgga agctctgcgt ttctgatctg 1100  
 aaaactgtaa cccatagaaa agctccccag gaggtgcctc actctgagaa 1150  
 gagatttaca aggaagagtg tgggtggcttc tcagagtttc caagcaggga 1200  
 aacattactg ggaggtggac ggaggacaca ataaaagggtg gcgcgtggga 1250  
 gtgtgccggg atgatgtgga caggaggaag gagtacgtga ctttgtctcc 1300  
 cgatcatggg tactgggtcc tcagactgaa tggagaacat ttgtatttca 1350  
 cattaaatcc ccgttttatc agcgtcttcc ccaggacccc acctacaaaa 1400  
 ataggggtct tcctggacta tgagtgtggg accatctcct tcttcaacat 1450  
 aaatgaccag tcccttattt ataccctgac atgtcgggtt gaaggcttat 1500  
 tgaggcccta cattgagtat ccgtcctata atgagcaaaa tggaactccc 1550  
 atagtcatct gccagtcac ccaggaatca gagaaagagg cctcttggca 1600  
 aagggcctct gcaatcccag agacaagcaa cagtgagtcc tcctcacagg 1650  
 caaccacgcc cttcctcccc aggggtgaaa tgtaggatga atcacatccc 1700  
 acattcttct ttagggatat taaggctctc ctcccagatc caaagtcccg 1750  
 cagcagccgg ccaaggtggc ttccagatga agggggactg gcctgtccac 1800  
 atgggagtca ggtgtcatgg ctgccctgag ctgggaggga agaaggctga 1850  
 cattacattt agtttgctct cactccatct ggctaagtga tcttgaaata 1900  
 ccacctctca ggtgaagaac cgtcaggaat tcccatctca caggctgtgg 1950  
 tgtagattaa gtagacaagg aatgtgaata atgcttagat cttattgatg 2000  
 acagagtgta tcctaattgg ttgttcatta tattacactt tcagtaaaaa 2050

aa 2052

<210> 84

<211> 500

<212> PRT

<213> Homo Sapien

<400> 84

Met	Ala	Leu	Met	Leu	Ser	Leu	Val	Leu	Ser	Leu	Leu	Lys	Leu	Gly
1				5					10					15

Ser	Gly	Gln	Trp	Gln	Val	Phe	Gly	Pro	Asp	Lys	Pro	Val	Gln	Ala
				20					25					30

Leu	Val	Gly	Glu	Asp	Ala	Ala	Phe	Ser	Cys	Phe	Leu	Ser	Pro	Lys
				35					40					45

Thr Asn Ala Glu Ala Met Glu Val Arg Phe Phe Arg Gly Gln Phe

				50						55				60	
Ser	Ser	Val	Val	His	Leu	Tyr	Arg	Asp	Gly	Lys	Asp	Gln	Pro	Phe	
				65					70					75	
Met	Gln	Met	Pro	Gln	Tyr	Gln	Gly	Arg	Thr	Lys	Leu	Val	Lys	Asp	
				80					85					90	
Ser	Ile	Ala	Glu	Gly	Arg	Ile	Ser	Leu	Arg	Leu	Glu	Asn	Ile	Thr	
				95					100					105	
Val	Leu	Asp	Ala	Gly	Leu	Tyr	Gly	Cys	Arg	Ile	Ser	Ser	Gln	Ser	
				110					115					120	
Tyr	Tyr	Gln	Lys	Ala	Ile	Trp	Glu	Leu	Gln	Val	Ser	Ala	Leu	Gly	
				125					130					135	
Ser	Val	Pro	Leu	Ile	Ser	Ile	Thr	Gly	Tyr	Val	Asp	Arg	Asp	Ile	
				140					145					150	
Gln	Leu	Leu	Cys	Gln	Ser	Ser	Gly	Trp	Phe	Pro	Arg	Pro	Thr	Ala	
				155					160					165	
Lys	Trp	Lys	Gly	Pro	Gln	Gly	Gln	Asp	Leu	Ser	Thr	Asp	Ser	Arg	
				170					175					180	
Thr	Asn	Arg	Asp	Met	His	Gly	Leu	Phe	Asp	Val	Glu	Ile	Ser	Leu	
				185					190					195	
Thr	Val	Gln	Glu	Asn	Ala	Gly	Ser	Ile	Ser	Cys	Ser	Met	Arg	His	
				200					205					210	
Ala	His	Leu	Ser	Arg	Glu	Val	Glu	Ser	Arg	Val	Gln	Ile	Gly	Asp	
				215					220					225	
Thr	Phe	Phe	Glu	Pro	Ile	Ser	Trp	His	Leu	Ala	Thr	Lys	Val	Leu	
				230					235					240	
Gly	Ile	Leu	Cys	Cys	Gly	Leu	Phe	Phe	Gly	Ile	Val	Gly	Leu	Lys	
				245					250					255	
Ile	Phe	Phe	Ser	Lys	Phe	Gln	Trp	Lys	Ile	Gln	Ala	Glu	Leu	Asp	
				260					265					270	
Trp	Arg	Arg	Lys	His	Gly	Gln	Ala	Glu	Leu	Arg	Asp	Ala	Arg	Lys	
				275					280					285	
His	Ala	Val	Glu	Val	Thr	Leu	Asp	Pro	Glu	Thr	Ala	His	Pro	Lys	
				290					295					300	
Leu	Cys	Val	Ser	Asp	Leu	Lys	Thr	Val	Thr	His	Arg	Lys	Ala	Pro	
				305					310					315	
Gln	Glu	Val	Pro	His	Ser	Glu	Lys	Arg	Phe	Thr	Arg	Lys	Ser	Val	
				320					325					330	
Val	Ala	Ser	Gln	Ser	Phe	Gln	Ala	Gly	Lys	His	Tyr	Trp	Glu	Val	

	335		340		345
Asp Gly Gly His	Asn Lys Arg Trp Arg	Val Gly Val Cys Arg Asp			
	350	355		360	
Asp Val Asp Arg	Arg Lys Glu Tyr Val	Thr Leu Ser Pro Asp His			
	365	370		375	
Gly Tyr Trp Val	Leu Arg Leu Asn Gly	Glu His Leu Tyr Phe Thr			
	380	385		390	
Leu Asn Pro Arg	Phe Ile Ser Val Phe	Pro Arg Thr Pro Pro Thr			
	395	400		405	
Lys Ile Gly Val	Phe Leu Asp Tyr Glu	Cys Gly Thr Ile Ser Phe			
	410	415		420	
Phe Asn Ile Asn	Asp Gln Ser Leu Ile	Tyr Thr Leu Thr Cys Arg			
	425	430		435	
Phe Glu Gly Leu	Leu Arg Pro Tyr Ile	Glu Tyr Pro Ser Tyr Asn			
	440	445		450	
Glu Gln Asn Gly	Thr Pro Ile Val Ile	Cys Pro Val Thr Gln Glu			
	455	460		465	
Ser Glu Lys Glu	Ala Ser Trp Gln Arg	Ala Ser Ala Ile Pro Glu			
	470	475		480	
Thr Ser Asn Ser	Glu Ser Ser Ser Gln	Ala Thr Thr Pro Phe Leu			
	485	490		495	
Pro Arg Gly Glu Met					
	500				

<210> 85  
 <211> 1665  
 <212> DNA  
 <213> Homo Sapien

<400> 85  
 aacagacgtt ccctcgcggc cctggcacct ctaaccccag acatgctgct 50  
 gctgctgctg cccctgctct gggggagggg gagggcggaa ggacagacaa 100  
 gtaaactgct gacgatgcag agttccgtga cggtgcagga aggcctgtgt 150  
 gtccatgtgc cctgctcctt ctctacccc tcgcatggct ggatttacct 200  
 tggcccagta gttcatggct actggttccg ggaagggggc aatacagacc 250  
 aggatgctcc agtggccaca aacaaccag ctcgggcagt gtgggaggag 300  
 actcgggacc gattccacct ccttggggac ccacatacca agaattgcac 350  
 cctgagcatc agagatgcc aagaagtga tgcggggaga tacttctttc 400



gtatggagaa aggaagtata aaatggaatt ataaacatca ccggctctct 450  
 gtgaatgtga cagccttgac ccacaggccc aacatcctca tcccaggcac 500  
 cctggagtcc ggctgcccc agaatctgac ctgctctgtg ccctgggcct 550  
 gtgagcaggg gacaccccct atgatctcct ggataggac ctccgtgtcc 600  
 cccctggacc cctccaccac ccgctcctcg gtgctcacc tcatcccaca 650  
 gccccaggac catggcacca gcctcacctg tcaggtgacc ttccctgggg 700  
 ccagcgtgac cacgaacaag accgtccatc tcaacgtgtc ctacccgcct 750  
 cagaacttga ccatgactgt cttccaagga gacggcacag tatccacagt 800  
 cttgggaaat ggctcatctc tgtcactccc agagggccag tctctgcgcc 850  
 tggctctgtgc agttgatgca gttgacagca atccccctgc caggctgagc 900  
 ctgagctgga gaggcctgac cctgtgcccc tcacagccct caaaccggg 950  
 ggtgctggag ctgccttggg tgcacctgag ggatgcagct gaattcacct 1000  
 gcagagctca gaaccctctc ggctctcagc aggtctacct gaacgtctcc 1050  
 ctgcagagca aagccacatc aggagtgact caggggggtg tcgggggagc 1100  
 tggagccaca gccctgggtc tctgtcctt ctgcgtcatc ttcgtttag 1150  
 tgaggtcctg caggaagaaa tcggcaaggc cagcagcggg cgtgggagat 1200  
 acgggcatag aggatgcaaa cgctgtcagg ggttcagcct ctcaggggcc 1250  
 cctgactgaa ccttgggcag aagacagtcc ccagaccag cctccccag 1300  
 cttctgcccg ctctcagtg ggggaaggag agctccagta tgcattcctc 1350  
 agcttccaga tggatgaagc ttgggactcg cggggacagg aggcactga 1400  
 caccgagtac tcggagatca agatccacag atgagaaact gcagagactc 1450  
 accctgattg agggatcaca gccctccag gcaagggaga agtcagaggc 1500  
 tgattcttgt agaattaaca gccctcaacg tgatgagcta tgataaact 1550  
 atgaattatg tgcagagtga aaagcacaca ggctttagag tcaaagtatc 1600  
 tcaaacctga atccacactg tgccctccct tttatTTTTT taactaaaag 1650  
 acagacaaat tccta 1665

<210> 86  
 <211> 463  
 <212> PRT  
 <213> Homo Sapien

<400> 86

Met	Leu	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Trp	Gly	Arg	Glu	Arg	Ala	
1				5					10					15	
Glu	Gly	Gln	Thr	Ser	Lys	Leu	Leu	Thr	Met	Gln	Ser	Ser	Val	Thr	
				20					25					30	
Val	Gln	Glu	Gly	Leu	Cys	Val	His	Val	Pro	Cys	Ser	Phe	Ser	Tyr	
				35					40					45	
Pro	Ser	His	Gly	Trp	Ile	Tyr	Pro	Gly	Pro	Val	Val	His	Gly	Tyr	
				50					55					60	
Trp	Phe	Arg	Glu	Gly	Ala	Asn	Thr	Asp	Gln	Asp	Ala	Pro	Val	Ala	
				65					70					75	
Thr	Asn	Asn	Pro	Ala	Arg	Ala	Val	Trp	Glu	Glu	Thr	Arg	Asp	Arg	
				80					85					90	
Phe	His	Leu	Leu	Gly	Asp	Pro	His	Thr	Lys	Asn	Cys	Thr	Leu	Ser	
				95					100					105	
Ile	Arg	Asp	Ala	Arg	Arg	Ser	Asp	Ala	Gly	Arg	Tyr	Phe	Phe	Arg	
				110					115					120	
Met	Glu	Lys	Gly	Ser	Ile	Lys	Trp	Asn	Tyr	Lys	His	His	Arg	Leu	
				125					130					135	
Ser	Val	Asn	Val	Thr	Ala	Leu	Thr	His	Arg	Pro	Asn	Ile	Leu	Ile	
				140					145					150	
Pro	Gly	Thr	Leu	Glu	Ser	Gly	Cys	Pro	Gln	Asn	Leu	Thr	Cys	Ser	
				155					160					165	
Val	Pro	Trp	Ala	Cys	Glu	Gln	Gly	Thr	Pro	Pro	Met	Ile	Ser	Trp	
				170					175					180	
Ile	Gly	Thr	Ser	Val	Ser	Pro	Leu	Asp	Pro	Ser	Thr	Thr	Arg	Ser	
				185					190					195	
Ser	Val	Leu	Thr	Leu	Ile	Pro	Gln	Pro	Gln	Asp	His	Gly	Thr	Ser	
				200					205					210	
Leu	Thr	Cys	Gln	Val	Thr	Phe	Pro	Gly	Ala	Ser	Val	Thr	Thr	Asn	
				215					220					225	
Lys	Thr	Val	His	Leu	Asn	Val	Ser	Tyr	Pro	Pro	Gln	Asn	Leu	Thr	
				230					235					240	
Met	Thr	Val	Phe	Gln	Gly	Asp	Gly	Thr	Val	Ser	Thr	Val	Leu	Gly	
				245					250					255	
Asn	Gly	Ser	Ser	Leu	Ser	Leu	Pro	Glu	Gly	Gln	Ser	Leu	Arg	Leu	
				260					265					270	
Val	Cys	Ala	Val	Asp	Ala	Val	Asp	Ser	Asn	Pro	Pro	Ala	Arg	Leu	
				275					280					285	

Ser	Leu	Ser	Trp	Arg	Gly	Leu	Thr	Leu	Cys	Pro	Ser	Gln	Pro	Ser	
				290					295					300	
Asn	Pro	Gly	Val	Leu	Glu	Leu	Pro	Trp	Val	His	Leu	Arg	Asp	Ala	
				305					310					315	
Ala	Glu	Phe	Thr	Cys	Arg	Ala	Gln	Asn	Pro	Leu	Gly	Ser	Gln	Gln	
				320					325					330	
Val	Tyr	Leu	Asn	Val	Ser	Leu	Gln	Ser	Lys	Ala	Thr	Ser	Gly	Val	
				335					340					345	
Thr	Gln	Gly	Val	Val	Gly	Gly	Ala	Gly	Ala	Thr	Ala	Leu	Val	Phe	
				350					355					360	
Leu	Ser	Phe	Cys	Val	Ile	Phe	Val	Val	Val	Arg	Ser	Cys	Arg	Lys	
				365					370					375	
Lys	Ser	Ala	Arg	Pro	Ala	Ala	Gly	Val	Gly	Asp	Thr	Gly	Ile	Glu	
				380					385					390	
Asp	Ala	Asn	Ala	Val	Arg	Gly	Ser	Ala	Ser	Gln	Gly	Pro	Leu	Thr	
				395					400					405	
Glu	Pro	Trp	Ala	Glu	Asp	Ser	Pro	Pro	Asp	Gln	Pro	Pro	Pro	Ala	
				410					415					420	
Ser	Ala	Arg	Ser	Ser	Val	Gly	Glu	Gly	Glu	Leu	Gln	Tyr	Ala	Ser	
				425					430					435	
Leu	Ser	Phe	Gln	Met	Val	Lys	Pro	Trp	Asp	Ser	Arg	Gly	Gln	Glu	
				440					445					450	
Ala	Thr	Asp	Thr	Glu	Tyr	Ser	Glu	Ile	Lys	Ile	His	Arg			
				455					460						

<210> 87  
 <211> 1176  
 <212> DNA  
 <213> Homo Sapien

<400> 87  
 agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50  
 aggagctctc tgtaccaag gaaagtgcag ctgagactca gacaagatta 100  
 caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150  
 tggagtacag atgaggctaa tacttacttc aaggaaatgga cctgttcttc 200  
 gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250  
 gtgcatttga tggcctgtat tttctccgca ctgagaatgg tgttatctac 300  
 cagaccttct gtgacatgac ctctgggggt ggcggctgga ccctgggtggc 350  
 cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

```

gggccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
tgggccaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
gtttggcatc taccagaaat atccagtga atatggagaa ggaaagtgtt 700
ggactgacaa cggcccgggtg atccctgtgg tctatgattt tggcgacgcc 750
cagaaaacag catcttatta ctcaccctat ggccagcggg aattcactgc 800
gggatttggt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
tgtgtgctgg aatgaggggc accggatgta aactgagca tcaactgcatt 900
ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
ttctggtttt gattggagtg gatatggaac tcatgttggt tacagcagca 1000
gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
tgtgggaggg aaccagacc tctcctccca accatgagat cccaaggatg 1100
gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
taaatcatat tgactcaaga aaaaaa 1176

```

<210> 88  
 <211> 313  
 <212> PRT  
 <213> Homo Sapien

```

<400> 88
Met Asn Gln Leu Ser Phe Leu Leu Phe Leu Ile Ala Thr Thr Arg
  1                      5                      10          15

Gly Trp Ser Thr Asp Glu Ala Asn Thr Tyr Phe Lys Glu Trp Thr
                20                      25          30

Cys Ser Ser Ser Pro Ser Leu Pro Arg Ser Cys Lys Glu Ile Lys
                35                      40          45

Asp Glu Cys Pro Ser Ala Phe Asp Gly Leu Tyr Phe Leu Arg Thr
                50                      55          60

Glu Asn Gly Val Ile Tyr Gln Thr Phe Cys Asp Met Thr Ser Gly
                65                      70          75

Gly Gly Gly Trp Thr Leu Val Ala Ser Val His Glu Asn Asp Met
                80                      85          90

```

Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly	
				95					100					105	
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr	
				110					115					120	
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys	
				125					130					135	
Asn	Pro	Gly	Tyr	Tyr	Asp	Ile	Gln	Ala	Lys	Asp	Leu	Gly	Ile	Trp	
				140					145					150	
His	Val	Pro	Asn	Lys	Ser	Pro	Met	Gln	His	Trp	Arg	Asn	Ser	Ser	
				155					160					165	
Leu	Leu	Arg	Tyr	Arg	Thr	Asp	Thr	Gly	Phe	Leu	Gln	Thr	Leu	Gly	
				170					175					180	
His	Asn	Leu	Phe	Gly	Ile	Tyr	Gln	Lys	Tyr	Pro	Val	Lys	Tyr	Gly	
				185					190					195	
Glu	Gly	Lys	Cys	Trp	Thr	Asp	Asn	Gly	Pro	Val	Ile	Pro	Val	Val	
				200					205					210	
Tyr	Asp	Phe	Gly	Asp	Ala	Gln	Lys	Thr	Ala	Ser	Tyr	Tyr	Ser	Pro	
				215					220					225	
Tyr	Gly	Gln	Arg	Glu	Phe	Thr	Ala	Gly	Phe	Val	Gln	Phe	Arg	Val	
				230					235					240	
Phe	Asn	Asn	Glu	Arg	Ala	Ala	Asn	Ala	Leu	Cys	Ala	Gly	Met	Arg	
				245					250					255	
Val	Thr	Gly	Cys	Asn	Thr	Glu	His	His	Cys	Ile	Gly	Gly	Gly	Gly	
				260					265					270	
Tyr	Phe	Pro	Glu	Ala	Ser	Pro	Gln	Gln	Cys	Gly	Asp	Phe	Ser	Gly	
				275					280					285	
Phe	Asp	Trp	Ser	Gly	Tyr	Gly	Thr	His	Val	Gly	Tyr	Ser	Ser	Ser	
				290					295					300	
Arg	Glu	Ile	Thr	Glu	Ala	Ala	Val	Leu	Leu	Phe	Tyr	Arg			
				305					310						

<210> 89

<211> 759

<212> DNA

<213> Homo Sapien

<400> 89

ctagatttgt cggttgcgg ggagacttca ggagtcgctg tctctgaact 50

tccagcctca gagaccgccg cccttgctcc cgagggccat gggccgggtc 100

tcagggttg tgccctctcg cttctgacg ctctggcgc atctggtggt 150

cgtcatcacc ttattctggt cccgggacag caacatacag gcctgcctgc 200  
 ctctcacgtt ccccccgag gagtatgaca agcaggacat tcagctggtg 250  
 gccgcgtct ctgtcacct gggcctcttt gcagtggagc tggccggttt 300  
 cctctcagga gtctccatgt tcaacagcac ccagagcctc atctccattg 350  
 gggctcactg tagtgcaccc gtggccctgt ccttcttcat attcgagcgt 400  
 tgggagtgca ctacgtattg gtacattttt gtcttctgca gtgcccttcc 450  
 agctgtcact gaaatggctt tattcgtcac cgtctttggg ctgaaaaaga 500  
 aacccttctg attaccttca tgacgggaac ctaaggacga agcctacagg 550  
 ggcaagggcc gcttcgtatt cctggaagaa ggaaggcata ggcttcggtt 600  
 ttcccctcgg aaactgcttc tgctggagga tatgtgttgg aataattacg 650  
 tcttgagtct gggattatcc gcattgtatt tagtgctttg taataaaata 700  
 tgtttttag tagtaacattaag acttatatac agtttttaggg gacaattaa 750  
 aaaaaaaaa 759

<210> 90  
 <211> 140  
 <212> PRT  
 <213> Homo Sapien

<400> 90  
 Met Gly Arg Val Ser Gly Leu Val Pro Ser Arg Phe Leu Thr Leu  
 1 5 10 15  
 Leu Ala His Leu Val Val Val Ile Thr Leu Phe Trp Ser Arg Asp  
 20 25 30  
 Ser Asn Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu  
 35 40 45  
 Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr  
 50 55 60  
 Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val  
 65 70 75  
 Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile Gly Ala His  
 80 85 90  
 Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu Arg Trp  
 95 100 105  
 Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala Leu  
 110 115 120  
 Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu

125

130

135

Lys Lys Lys Pro Phe  
140

&lt;210&gt; 91

&lt;211&gt; 1871

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 91

ctgggacccc gaaaagagaa ggggagagcg aggggacgag agcggaggag 50  
gaagatgcaa ctgactcgct gctgcttcgt gttcctggtg cagggtagcc 100  
tctatctggt catctgtggc caggatgatg gtcctcccgg ctgagaggac 150  
cctgagcgtg atgaccacga gggccagccc cggccccggg tgccctcgaa 200  
gcggggccac atctcaccta agtcccggcc catggccaat tccactctcc 250  
tagggctgct ggccccgcct ggggaggctt ggggcattct tgggcagccc 300  
cccaaccgcc cgaaccacag cccccaccc tcagccaagg tgaagaaaat 350  
ctttggctgg ggcgacttct actccaacat caagacggtg gccctgaacc 400  
tgctcgtcac agggaagatt gtggaccatg gcaatgggac cttcagcgtc 450  
cacttccaac acaatgccac aggccaggga aacatctcca tcagcctcgt 500  
gccccccagt aaagctgtag agttccacca ggaacagcag atcttcatcg 550  
aagccaaggc ctccaaaatc ttcaactgcc ggatggagtg ggagaaggta 600  
gaacggggcc gccggacctc gctttgcacc cacgacctag ccaagatctg 650  
ctcccagac cacgctcaga gtcagccac ctggagctgc tcccagccct 700  
tcaaagtcgt ctgtgtctac atcgccttct acagcacgga ctatcggctg 750  
gtccagaagg tgtgccaga ttacaactac catagtata cccctacta 800  
cccatctggg tgaccggggg caggccacag aggccaggcc agggctggaa 850  
ggacaggcct gcccatgcag gagaccatct ggacaccggg cagggaaggg 900  
gttgggcctc aggcaggag gggggtggag acgaggagat gccaaagtggg 950  
gccagggcc aagtctcaagt ggcagagaaa ggggcccaag tgctggtccc 1000  
aacctgaagc tgtggagtga ctagatcaca ggagcactgg aggaggagtg 1050  
ggctctctgt gcagcctcac agggctttgc cacggagcca cagagagatg 1100  
ctgggtcccc gaggcctgtg ggcaggccga tcagtgtggc cccagatcaa 1150  
gtcatgggag gaagctaagc ccttggttct tgccatcctg aggaaagata 1200

gcaacagggga gggggagatt tcatcagtgt ggacagcctg tcaacttagg 1250  
atggatggct gagagggctt cctaggagcc agtcagcagg gtgggggtggg 1300  
gccagaggag ctctccagcc ctgcctagtg ggcgcctga gccccttgtc 1350  
gtgtgctgag catggcatga ggctgaagtg gcaaccctgg ggtctttgat 1400  
gtcttgacag attgaccatc tgtctccagc caggccaccc ctttccaaaa 1450  
ttccctcttc tgccagtact cccctgtac caccattgc tgatggcaca 1500  
cccatcctta agctaagaca ggacgattgt ggtcctccca cactaaggcc 1550  
acagcccata cgcgtgctgt gtgtccctct tccaccccaa cccctgctgg 1600  
ctcctctggg agcatccatg tcccgagag gggtcctca acagtcagcc 1650  
tcacctgtca gaccgggggt ctcccgatc tggatggcgc cgcctctca 1700  
gcagcgggca cgggtggggc ggggccgggc cgcagagcat gtgctggatc 1750  
tgttctgtgt gtctgtctgt ggggtggggg aggggaggga agtcttgtga 1800  
aaccgctgat tgctgacttt tgtgtgaaga atcgtgttct tggagcagga 1850  
aataaagctt gccccggggc a 1871

<210> 92

<211> 252

<212> PRT

<213> Homo Sapien

<400> 92

Met	Gln	Leu	Thr	Arg	Cys	Cys	Phe	Val	Phe	Leu	Val	Gln	Gly	Ser	1	5	10	15
Leu	Tyr	Leu	Val	Ile	Cys	Gly	Gln	Asp	Asp	Gly	Pro	Pro	Gly	Ser	20	25	30	35
Glu	Asp	Pro	Glu	Arg	Asp	Asp	His	Glu	Gly	Gln	Pro	Arg	Pro	Arg	35	40	45	50
Val	Pro	Arg	Lys	Arg	Gly	His	Ile	Ser	Pro	Lys	Ser	Arg	Pro	Met	50	55	60	65
Ala	Asn	Ser	Thr	Leu	Leu	Gly	Leu	Leu	Ala	Pro	Pro	Gly	Glu	Ala	65	70	75	80
Trp	Gly	Ile	Leu	Gly	Gln	Pro	Pro	Asn	Arg	Pro	Asn	His	Ser	Pro	80	85	90	95
Pro	Pro	Ser	Ala	Lys	Val	Lys	Lys	Ile	Phe	Gly	Trp	Gly	Asp	Phe	95	100	105	110
Tyr	Ser	Asn	Ile	Lys	Thr	Val	Ala	Leu	Asn	Leu	Leu	Val	Thr	Gly	110	115	120	125



Lys	Ile	Val	Asp	His	Gly	Asn	Gly	Thr	Phe	Ser	Val	His	Phe	Gln	125	130	135
His	Asn	Ala	Thr	Gly	Gln	Gly	Asn	Ile	Ser	Ile	Ser	Leu	Val	Pro	140	145	150
Pro	Ser	Lys	Ala	Val	Glu	Phe	His	Gln	Glu	Gln	Gln	Ile	Phe	Ile	155	160	165
Glu	Ala	Lys	Ala	Ser	Lys	Ile	Phe	Asn	Cys	Arg	Met	Glu	Trp	Glu	170	175	180
Lys	Val	Glu	Arg	Gly	Arg	Arg	Thr	Ser	Leu	Cys	Thr	His	Asp	Pro	185	190	195
Ala	Lys	Ile	Cys	Ser	Arg	Asp	His	Ala	Gln	Ser	Ser	Ala	Thr	Trp	200	205	210
Ser	Cys	Ser	Gln	Pro	Phe	Lys	Val	Val	Cys	Val	Tyr	Ile	Ala	Phe	215	220	225
Tyr	Ser	Thr	Asp	Tyr	Arg	Leu	Val	Gln	Lys	Val	Cys	Pro	Asp	Tyr	230	235	240
Asn	Tyr	His	Ser	Asp	Thr	Pro	Tyr	Tyr	Pro	Ser	Gly				245	250	

<210> 93

<211> 902

<212> DNA

<213> Homo Sapien

<400> 93

```

cggtgggccat gactgcgggcc gtgttcttcg gctgcgccctt cattgccttc 50
gggcctgcgc tcgcccttta tgtcttcacc atcgccatcg agccgttgcg 100
tatcatcttc ctcacgcgcg gagctttctt ctggttggtg tctctactga 150
tttcgtccct tgtttggttc atggcaagag tcattattga caacaaagat 200
ggaccaacac agaaatatct gctgatcttt ggagcgtttg tctctgtcta 250
tatccaagaa atgttccgat ttgcatatta taaactctta aaaaaagcca 300
gtgaaggttt gaagagtata aaccaggtg agacagcacc ctctatgcga 350
ctgctggcct atgtttctgg cttgggcttt ggaatcatga gtggagtatt 400
ttcctttgtg aataccctat ctgactcctt ggggccaggc acagtgggca 450
ttcatggaga ttctcctcaa ttcttccttt attcagcttt catgacgctg 500
gtcattatct tgctgcatgt attctggggc attgtatatt ttgatggctg 550
tgagaagaaa aagtggggca tcctccttat cgttctcctg acccacctgc 600

```

tggtgtcagc ccagaccttc ataagttctt attatggaat aaacctggcg 650  
 tcagcattta taatcctggg gctcatgggc acctgggcat tcttagctgc 700  
 gggaggcagc tgccgaagcc tgaaactctg cctgctctgc caagacaaga 750  
 actttcttct ttacaaccag cgctccagat aacctcaggg aaccagcact 800  
 tcccaaaccg cagactacat ctttagagga agcacaactg tgcctttttc 850  
 tgaaaatccc tttttctggg ggaattgaga aagaaataaa actatgcaga 900  
 ta 902

<210> 94  
 <211> 257  
 <212> PRT  
 <213> Homo Sapien

<400> 94  
 Met Thr Ala Ala Val Phe Phe Gly Cys Ala Phe Ile Ala Phe Gly  
 1 5 10 15  
 Pro Ala Leu Ala Leu Tyr Val Phe Thr Ile Ala Ile Glu Pro Leu  
 20 25 30  
 Arg Ile Ile Phe Leu Ile Ala Gly Ala Phe Phe Trp Leu Val Ser  
 35 40 45  
 Leu Leu Ile Ser Ser Leu Val Trp Phe Met Ala Arg Val Ile Ile  
 50 55 60  
 Asp Asn Lys Asp Gly Pro Thr Gln Lys Tyr Leu Leu Ile Phe Gly  
 65 70 75  
 Ala Phe Val Ser Val Tyr Ile Gln Glu Met Phe Arg Phe Ala Tyr  
 80 85 90  
 Tyr Lys Leu Leu Lys Lys Ala Ser Glu Gly Leu Lys Ser Ile Asn  
 95 100 105  
 Pro Gly Glu Thr Ala Pro Ser Met Arg Leu Leu Ala Tyr Val Ser  
 110 115 120  
 Gly Leu Gly Phe Gly Ile Met Ser Gly Val Phe Ser Phe Val Asn  
 125 130 135  
 Thr Leu Ser Asp Ser Leu Gly Pro Gly Thr Val Gly Ile His Gly  
 140 145 150  
 Asp Ser Pro Gln Phe Phe Leu Tyr Ser Ala Phe Met Thr Leu Val  
 155 160 165  
 Ile Ile Leu Leu His Val Phe Trp Gly Ile Val Phe Phe Asp Gly  
 170 175 180

Cys	Glu	Lys	Lys	Lys	Trp	Gly	Ile	Leu	Leu	Ile	Val	Leu	Leu	Thr
				185					190					195
His	Leu	Leu	Val	Ser	Ala	Gln	Thr	Phe	Ile	Ser	Ser	Tyr	Tyr	Gly
				200					205					210
Ile	Asn	Leu	Ala	Ser	Ala	Phe	Ile	Ile	Leu	Val	Leu	Met	Gly	Thr
				215					220					225
Trp	Ala	Phe	Leu	Ala	Ala	Gly	Gly	Ser	Cys	Arg	Ser	Leu	Lys	Leu
				230					235					240
Cys	Leu	Leu	Cys	Gln	Asp	Lys	Asn	Phe	Leu	Leu	Tyr	Asn	Gln	Arg
				245					250					255

Ser Arg

<210> 95  
 <211> 1073  
 <212> DNA  
 <213> Homo Sapien

<400> 95  
 aattttttcac cagagtaaacc ttgagaaacc aactggacct tgagtattgt 50  
 acattttgcc tcgtggaccc aaaggtagca atctgaaaca tgaggagtac 100  
 gattctactg ttttgtcttc taggatcaac tcggtcatta ccacagctca 150  
 aacctgcttt gggactccct cccacaaaac tggctccgga tcagggaaca 200  
 ctaccaaacc aacagcagtc aaatcaggtc tttccttctt taagtctgat 250  
 accattaaca cagatgctca cactggggcc agatctgcat ctgttaaatac 300  
 ctgctgcagg aatgacacct ggtacccaga cccacccatt gaccctggga 350  
 gggttgaatg tacaacagca actgcaccca catgtgttac caatttttgt 400  
 cacacaactt ggagcccagg gcactatcct aagctcagag gaattgccac 450  
 aaatcttcac gagcctcatc atccattcct tgttcccggg aggcattcctg 500  
 cccaccagtc aggcaggggc taatccagat gtccaggatg gaagccttcc 550  
 agcaggagga gcaggtgtaa atcctgccac ccagggaacc ccagcaggcc 600  
 gcctcccaac tcccagtggc acagatgacg actttgcagt gaccaccct 650  
 gcaggcatcc aaaggagcac acatgccatc gaggaagcca ccacagaatac 700  
 agcaaataga attcagtaag ctgtttcaaa ttttttcaac taagctgcct 750  
 cgaatttggt gatacatgtg aatctttatc attgattata ttatggaata 800  
 gattgagaca cattggatag tcttagaaga aattaattct taatttacct 850

gaaaatattc ttgaaatttc agaaaatatg ttctatgtag agaattccaa 900  
 cttttaaaaa caataattca atggataaat ctgtctttga aatataacat 950  
 tatgctgcct ggatgatatg catattaaaa catatttgga aaactggaaa 1000  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1050  
 aaaaaaaaaa aaaaaaaaaa aaa 1073

<210> 96  
 <211> 209  
 <212> PRT  
 <213> Homo Sapien

<400> 96  
 Met Arg Ser Thr Ile Leu Leu Phe Cys Leu Leu Gly Ser Thr Arg  
           1                  5                  10                  15  
 Ser Leu Pro Gln Leu Lys Pro Ala Leu Gly Leu Pro Pro Thr Lys  
                   20                  25                  30  
 Leu Ala Pro Asp Gln Gly Thr Leu Pro Asn Gln Gln Gln Ser Asn  
                   35                  40                  45  
 Gln Val Phe Pro Ser Leu Ser Leu Ile Pro Leu Thr Gln Met Leu  
                   50                  55                  60  
 Thr Leu Gly Pro Asp Leu His Leu Leu Asn Pro Ala Ala Gly Met  
                   65                  70                  75  
 Thr Pro Gly Thr Gln Thr His Pro Leu Thr Leu Gly Gly Leu Asn  
                   80                  85                  90  
 Val Gln Gln Gln Leu His Pro His Val Leu Pro Ile Phe Val Thr  
                   95                  100                  105  
 Gln Leu Gly Ala Gln Gly Thr Ile Leu Ser Ser Glu Glu Leu Pro  
                   110                  115                  120  
 Gln Ile Phe Thr Ser Leu Ile Ile His Ser Leu Phe Pro Gly Gly  
                   125                  130                  135  
 Ile Leu Pro Thr Ser Gln Ala Gly Ala Asn Pro Asp Val Gln Asp  
                   140                  145                  150  
 Gly Ser Leu Pro Ala Gly Gly Ala Gly Val Asn Pro Ala Thr Gln  
                   155                  160                  165  
 Gly Thr Pro Ala Gly Arg Leu Pro Thr Pro Ser Gly Thr Asp Asp  
                   170                  175                  180  
 Asp Phe Ala Val Thr Thr Pro Ala Gly Ile Gln Arg Ser Thr His  
                   185                  190                  195  
 Ala Ile Glu Glu Ala Thr Thr Glu Ser Ala Asn Gly Ile Gln

<210> 97  
 <211> 2848  
 <212> DNA  
 <213> Homo Sapien

<400> 97  
 gctcaagtgc cctgccttgc cccacccagc ccagcctggc cagagccccc 50  
 tggagaagga gctctcttct tgcttggcag ctggaccaag ggagccagtc 100  
 ttgggcgctg gagggcctgt cctgaccatg gtccctgcct ggctgtggct 150  
 gctttgtgtc tccgtccccc aggctctccc caaggcccag cctgcagagc 200  
 tgtctgtgga agttccagaa aactatgggtg gaaatttccc ttatacctg 250  
 accaagttgc cgctgccccg tgaggggggt gaaggccaga tcgtgctgtc 300  
 aggggactca ggcaaggcaa ctgagggccc atttgctatg gatccagatt 350  
 ctggcttctt gctgggtgacc agggccctgg accgagagga gcaggcagag 400  
 taccagctac aggtcaccct ggagatgcag gatggacatg tcttgtgggg 450  
 tccacagcct gtgcttgtgc acgtgaagga tgagaatgac caggtgcccc 500  
 atttctctca agccatctac agagctcggc tgagccgggg taccaggcct 550  
 ggcateccct tcctcttctt tgaggcttca gaccgggatg agccaggcac 600  
 agccaactcg gatcttcgat tccacatcct gagccaggct ccagcccagc 650  
 cttccccaga catgttccag ctggagcctc ggctgggggc tctggccctc 700  
 agccccaagg ggagcaccag ccttgaccac gccctggaga ggacctacca 750  
 gctgttggtg caggtcaagg acatgggtga ccaggcctca ggccaccagg 800 ..  
 ccactgccac cgtggaagtc tccatcatag agagcacctg ggtgtcccta 850  
 gagcctatcc acctggcaga gaatctcaaa gtcctatacc cgcaccacat 900  
 ggcccaggta cactggagtg ggggtgatgt gcactatcac ctggagagcc 950  
 atcccccgga accctttgaa gtgaatgcag agggaaacct ctacgtgacc 1000  
 agagagctgg acagagaagc ccaggctgag tacctgctcc aggtgcgggc 1050  
 tcagaattcc catggcgagg actatgcggc ccctctggag ctgcacgtgc 1100  
 tggatgatga tgagaatgac aacgtgccta tctgccctcc ccgtgacccc 1150  
 acagtcagca tccctgagct cagtcacca ggtactgaag tgactagact 1200  
 gtcagcagag gatgcagatg cccccggctc cccaattcc cacgttgtgt 1250

atcagctcct gagccctgag cctgaggatg gggtagaggg gagagccttc 1300  
caggtggacc ccacttcagg cagtgtgacg ctgggggtgc tcccactccg 1350  
agcaggccag aacatcctgc ttctggtgct ggccatggac ctggcaggcg 1400  
cagaggggtg cttcagcagc acgtgtgaag tcgaagtcgc agtcacagat 1450  
atcaatgatc acgcccctga gttcatcact tcccagattg ggcctataag 1500  
cctccctgag gatgtggagc ccgggactct ggtgggcatg ctaacagcca 1550  
ttgatgctga cctcagagccc gccttcgcgc tcatggattt tgccattgag 1600  
aggggagaca cagaaggagc ttttggcctg gattgggagc cagactctgg 1650  
gcatgttaga ctcagactct gcaagaacct cagttatgag gcagctccaa 1700  
gtcatgaggt ggtggtggtg gtgcagagtg tggcgaagct ggtggggcca 1750  
ggcccaggcc ctggagccac cgccacggtg actgtgctag tggagagagt 1800  
gatgccaccc cccaagttgg accaggagag ctacgaggcc agtgtcccca 1850  
tcagtgcccc agccggctct ttctgctga ccatccagcc ctccgacccc 1900  
atcagccgaa ccctcaggtt ctccctagtc aatgactcag agggctggct 1950  
ctgcattgag aaattctccg gggaggtgca caccgcccag tccctgcagg 2000  
gcgcccagcc tggggacacc tacacggtgc ttgtggaggc ccaggataca 2050  
gccctgactc ttgccctgt gccctccaa tacctctgca caccgcca 2100  
agaccatggc ttgatcgtga gtggaccag caaggacccc gatctggcca 2150  
gtgggcacgg tccctacagc ttcacccttg gtcccaaccc cacggtgcaa 2200  
cgggattggc gcctccagac tctcaatggt tcccatgcct acctcacctt 2250  
ggccctgcat tgggtggagc cacgtgaaca cataatcccc gtggtggtca 2300  
gccacaatgc ccagatgtgg cagctcctgg ttcgagtgat cgtgtgtcgc 2350  
tgcaacgtgg aggggcagtg catgcgcaag gtgggccgca tgaaggcat 2400  
gccacgaag ctgtcggcag tgggcatcct tgtaggcacc ctggtagcaa 2450  
taggaatctt cctcatcctc attttcaccc actggaccat gtcaaggaag 2500  
aaggaccgg atcaaccagc agacagcgtg ccctgaagg cgactgtctg 2550  
aatggcccag gcagctctag ctgggagctt ggcctctggc tccatctgag 2600  
tcccctggga gagagcccag caccgaagat ccagcagggg acaggacaga 2650

gtagaagccc ctccatctgc cctgggggtgg aggcaccatc accatcacca 2700  
 ggcatgtctg cagagcctgg acaccaactt tatggactgc ccatgggagt 2750  
 gctccaaatg tcaggggtgtt tgcccaataa taaagcccca gagaactggg 2800  
 ctgggcccta tgggaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaag 2848

<210> 98  
 <211> 807  
 <212> PRT  
 <213> Homo Sapien

<400> 98

Met	Val	Pro	Ala	Trp	Leu	Trp	Leu	Leu	Cys	Val	Ser	Val	Pro	Gln	1	5	10	15
Ala	Leu	Pro	Lys	Ala	Gln	Pro	Ala	Glu	Leu	Ser	Val	Glu	Val	Pro	20	25	30	
Glu	Asn	Tyr	Gly	Gly	Asn	Phe	Pro	Leu	Tyr	Leu	Thr	Lys	Leu	Pro	35	40	45	
Leu	Pro	Arg	Glu	Gly	Ala	Glu	Gly	Gln	Ile	Val	Leu	Ser	Gly	Asp	50	55	60	
Ser	Gly	Lys	Ala	Thr	Glu	Gly	Pro	Phe	Ala	Met	Asp	Pro	Asp	Ser	65	70	75	
Gly	Phe	Leu	Leu	Val	Thr	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Gln	Ala	80	85	90	
Glu	Tyr	Gln	Leu	Gln	Val	Thr	Leu	Glu	Met	Gln	Asp	Gly	His	Val	95	100	105	
Leu	Trp	Gly	Pro	Gln	Pro	Val	Leu	Val	His	Val	Lys	Asp	Glu	Asn	110	115	120	
Asp	Gln	Val	Pro	His	Phe	Ser	Gln	Ala	Ile	Tyr	Arg	Ala	Arg	Leu	125	130	135	
Ser	Arg	Gly	Thr	Arg	Pro	Gly	Ile	Pro	Phe	Leu	Phe	Leu	Glu	Ala	140	145	150	
Ser	Asp	Arg	Asp	Glu	Pro	Gly	Thr	Ala	Asn	Ser	Asp	Leu	Arg	Phe	155	160	165	
His	Ile	Leu	Ser	Gln	Ala	Pro	Ala	Gln	Pro	Ser	Pro	Asp	Met	Phe	170	175	180	
Gln	Leu	Glu	Pro	Arg	Leu	Gly	Ala	Leu	Ala	Leu	Ser	Pro	Lys	Gly	185	190	195	
Ser	Thr	Ser	Leu	Asp	His	Ala	Leu	Glu	Arg	Thr	Tyr	Gln	Leu	Leu	200	205	210	
Val	Gln	Val	Lys	Asp	Met	Gly	Asp	Gln	Ala	Ser	Gly	His	Gln	Ala				

				215					220					225
Thr	Ala	Thr	Val	Glu	Val	Ser	Ile	Ile	Glu	Ser	Thr	Trp	Val	Ser
				230					235					240
Leu	Glu	Pro	Ile	His	Leu	Ala	Glu	Asn	Leu	Lys	Val	Leu	Tyr	Pro
				245					250					255
His	His	Met	Ala	Gln	Val	His	Trp	Ser	Gly	Gly	Asp	Val	His	Tyr
				260					265					270
His	Leu	Glu	Ser	His	Pro	Pro	Gly	Pro	Phe	Glu	Val	Asn	Ala	Glu
				275					280					285
Gly	Asn	Leu	Tyr	Val	Thr	Arg	Glu	Leu	Asp	Arg	Glu	Ala	Gln	Ala
				290					295					300
Glu	Tyr	Leu	Leu	Gln	Val	Arg	Ala	Gln	Asn	Ser	His	Gly	Glu	Asp
				305					310					315
Tyr	Ala	Ala	Pro	Leu	Glu	Leu	His	Val	Leu	Val	Met	Asp	Glu	Asn
				320					325					330
Asp	Asn	Val	Pro	Ile	Cys	Pro	Pro	Arg	Asp	Pro	Thr	Val	Ser	Ile
				335					340					345
Pro	Glu	Leu	Ser	Pro	Pro	Gly	Thr	Glu	Val	Thr	Arg	Leu	Ser	Ala
				350					355					360
Glu	Asp	Ala	Asp	Ala	Pro	Gly	Ser	Pro	Asn	Ser	His	Val	Val	Tyr
				365					370					375
Gln	Leu	Leu	Ser	Pro	Glu	Pro	Glu	Asp	Gly	Val	Glu	Gly	Arg	Ala
				380					385					390
Phe	Gln	Val	Asp	Pro	Thr	Ser	Gly	Ser	Val	Thr	Leu	Gly	Val	Leu
				395					400					405
Pro	Leu	Arg	Ala	Gly	Gln	Asn	Ile	Leu	Leu	Leu	Val	Leu	Ala	Met
				410					415					420
Asp	Leu	Ala	Gly	Ala	Glu	Gly	Gly	Phe	Ser	Ser	Thr	Cys	Glu	Val
				425					430					435
Glu	Val	Ala	Val	Thr	Asp	Ile	Asn	Asp	His	Ala	Pro	Glu	Phe	Ile
				440					445					450
Thr	Ser	Gln	Ile	Gly	Pro	Ile	Ser	Leu	Pro	Glu	Asp	Val	Glu	Pro
				455					460					465
Gly	Thr	Leu	Val	Ala	Met	Leu	Thr	Ala	Ile	Asp	Ala	Asp	Leu	Glu
				470					475					480
Pro	Ala	Phe	Arg	Leu	Met	Asp	Phe	Ala	Ile	Glu	Arg	Gly	Asp	Thr
				485					490					495
Glu	Gly	Thr	Phe	Gly	Leu	Asp	Trp	Glu	Pro	Asp	Ser	Gly	His	Val



				500					505					510
Arg	Leu	Arg	Leu	Cys	Lys	Asn	Leu	Ser	Tyr	Glu	Ala	Ala	Pro	Ser
				515					520					525
His	Glu	Val	Val	Val	Val	Val	Gln	Ser	Val	Ala	Lys	Leu	Val	Gly
				530					535					540
Pro	Gly	Pro	Gly	Pro	Gly	Ala	Thr	Ala	Thr	Val	Thr	Val	Leu	Val
				545					550					555
Glu	Arg	Val	Met	Pro	Pro	Pro	Lys	Leu	Asp	Gln	Glu	Ser	Tyr	Glu
				560					565					570
Ala	Ser	Val	Pro	Ile	Ser	Ala	Pro	Ala	Gly	Ser	Phe	Leu	Leu	Thr
				575					580					585
Ile	Gln	Pro	Ser	Asp	Pro	Ile	Ser	Arg	Thr	Leu	Arg	Phe	Ser	Leu
				590					595					600
Val	Asn	Asp	Ser	Glu	Gly	Trp	Leu	Cys	Ile	Glu	Lys	Phe	Ser	Gly
				605					610					615
Glu	Val	His	Thr	Ala	Gln	Ser	Leu	Gln	Gly	Ala	Gln	Pro	Gly	Asp
				620					625					630
Thr	Tyr	Thr	Val	Leu	Val	Glu	Ala	Gln	Asp	Thr	Ala	Leu	Thr	Leu
				635					640					645
Ala	Pro	Val	Pro	Ser	Gln	Tyr	Leu	Cys	Thr	Pro	Arg	Gln	Asp	His
				650					655					660
Gly	Leu	Ile	Val	Ser	Gly	Pro	Ser	Lys	Asp	Pro	Asp	Leu	Ala	Ser
				665					670					675
Gly	His	Gly	Pro	Tyr	Ser	Phe	Thr	Leu	Gly	Pro	Asn	Pro	Thr	Val
				680					685					690
Gln	Arg	Asp	Trp	Arg	Leu	Gln	Thr	Leu	Asn	Gly	Ser	His	Ala	Tyr
				695					700					705
Leu	Thr	Leu	Ala	Leu	His	Trp	Val	Glu	Pro	Arg	Glu	His	Ile	Ile
				710					715					720
Pro	Val	Val	Val	Ser	His	Asn	Ala	Gln	Met	Trp	Gln	Leu	Leu	Val
				725					730					735
Arg	Val	Ile	Val	Cys	Arg	Cys	Asn	Val	Glu	Gly	Gln	Cys	Met	Arg
				740					745					750
Lys	Val	Gly	Arg	Met	Lys	Gly	Met	Pro	Thr	Lys	Leu	Ser	Ala	Val
				755					760					765
Gly	Ile	Leu	Val	Gly	Thr	Leu	Val	Ala	Ile	Gly	Ile	Phe	Leu	Ile
				770					775					780
Leu	Ile	Phe	Thr	His	Trp	Thr	Met	Ser	Arg	Lys	Lys	Asp	Pro	Asp

785

790

795

Gln Pro Ala Asp Ser Val Pro Leu Lys Ala Thr Val  
800 805

<210> 99  
<211> 2436  
<212> DNA  
<213> Homo Sapien

<400> 99  
ggctgaccgt gctacattgc ctggaggaag cctaaggaac ccaggcatcc 50  
agctgcccac gcctgagtcc aagattcttc ccaggaacac aaacgtagga 100  
gaccacgct cctggaagca ccagccttta tctcttcacc ttcaagtccc 150  
ctttctcaag aatcctctgt tctttgccct ctaaagtctt ggtacatcta 200  
ggaccagggc atcttgcttt ccagccacaa agagacagat gaagatgcag 250  
aaaggaaatg ttctccttat gtttgggtcta ctattgcatt tagaagctgc 300  
aacaaattcc aatgagacta gcacctctgc caacactgga tccagtgtga 350  
tctccagtgg agccagcaca gccaccaact ctgggtccag tgtgacctcc 400  
agtggggtca gcacagccac catctcaggg tccagcgtga cctccaatgg 450  
ggtcagcata gtcaccaact ctgagttcca tacaacctcc agtgggatca 500  
gcacagccac caactctgag ttcagcacag cgtccagtgg gatcagcata 550  
gccaccaact ctgagtccag cacaacctcc agtggggcca gcacagccac 600  
caactctgag tccagcacac cctccagtgg ggccagcaca gtcaccaact 650  
ctgggtccag tgtgacctcc agtggagcca gcaactgccac caactctgag 700  
tccagcacag tgtccagtag ggccagcact gccaccaact ctgagtctag 750  
cacactctcc agtggggcca gcacagccac caactctgac tccagcaca 800  
cctccagtgg ggctagcaca gccaccaact ctgagtccag cacaacctcc 850  
agtggggcca gcacagccac caactctgag tccagcacag tgtccagtag 900  
ggccagcact gccaccaact ctgagtccag cacaacctcc agtggggcca 950  
gcacagccac caactctgag tccagaacga cctccaatgg ggctggcaca 1000  
gccaccaact ctgagtccag cagcacctcc agtggggcca gcacagccac 1050  
caactctgac tccagcacag tgtccagtgg ggccagcact gccaccaact 1100  
ctgagtccag cagcacctcc agtggggcca gcacagccac caactctgag 1150

tccagcacga cctccagtgg ggctagcaca gccaccaact ctgactccag 1200  
 cacaacctcc agtggggccg gcacagccac caactctgag tccagcacag 1250  
 tgtccagtgg gatcagcaca gtcaccaatt ctgagtccag cacaccctcc 1300  
 agtggggcca acacagccac caactctgag tccagtacga cctccagtgg 1350  
 ggccaacaca gccaccaact ctgagtccag cacagtgtcc agtggggcca 1400  
 gcaactgccac caactctgag tccagcaca cctccagtgg ggtcagcaca 1450  
 gccaccaact ctgagtccag cacaacctcc agtggggcta gcacagccac 1500  
 caactctgac tccagcaca cctccagtga ggccagcaca gccaccaact 1550  
 ctgagtctag cacagtgtcc agtgggatca gcacagtcac caattctgag 1600  
 tccagcaca cctccagtgg ggccaacaca gccaccaact ctgggtccag 1650  
 tgtgacctct gcaggctctg gaacagcagc tctgactgga atgcacacaa 1700  
 cttcccatag tgcattctact gcagtgagtg aggcaaagcc tgggtgggtcc 1750  
 ctgggtgccgt gggaaatctt cctcatcacc ctgggtctcg ttgtggcggc 1800  
 cgtggggctc tttgctgggc tcttcttctg tgtgagaaac agcctgtccc 1850  
 tgagaaacac ctttaacaca gctgtctacc accctcatgg cctcaaccat 1900  
 ggccttggtc caggccctgg agggaatcat ggagccccc acaggcccag 1950  
 gtggagtcct aactggttct ggaggagacc agtatcatcg atagccatgg 2000  
 agatgagcgg gaggaacagc gggccctgag cagccccgga agcaagtgcc 2050  
 gcattcttca ggaaggaaga gacctgggca cccaagacct ggtttccttt 2100  
 cattcatccc aggagacccc tcccagcttt gtttgagatc ctgaaaatct 2150  
 tgaagaaggt attcctcacc tttcttgcc taccagaca ctggaaagag 2200  
 aatactatat tgctcattta gctaagaaat aaatacatct catctaacac 2250  
 acacgacaaa gagaagctgt gcttgccccg ggggtgggtat ctagctctga 2300  
 gatgaactca gttataggag aaaacctcca tgctggactc catctggcat 2350  
 tcaaaatctc cacagtaaaa tccaaagacc tcaaaaaaaaa aaaaaaaaaa 2400  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2436

<210> 100  
 <211> 596  
 <212> PRT  
 <213> Homo Sapien

<400> 100

Met	Lys	Met	Gln	Lys	Gly	Asn	Val	Leu	Leu	Met	Phe	Gly	Leu	Leu
1				5					10					15
Leu	His	Leu	Glu	Ala	Ala	Thr	Asn	Ser	Asn	Glu	Thr	Ser	Thr	Ser
				20					25					30
Ala	Asn	Thr	Gly	Ser	Ser	Val	Ile	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				35					40					45
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ser	Gly	Val	Ser	Thr	Ala
				50					55					60
Thr	Ile	Ser	Gly	Ser	Ser	Val	Thr	Ser	Asn	Gly	Val	Ser	Ile	Val
				65					70					75
Thr	Asn	Ser	Glu	Phe	His	Thr	Thr	Ser	Ser	Gly	Ile	Ser	Thr	Ala
				80					85					90
Thr	Asn	Ser	Glu	Phe	Ser	Thr	Ala	Ser	Ser	Gly	Ile	Ser	Ile	Ala
				95					100					105
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				110					115					120
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Pro	Ser	Ser	Gly	Ala	Ser	Thr	Val
				125					130					135
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				140					145					150
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Arg	Ala	Ser	Thr	Ala
				155					160					165
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Leu	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				170					175					180
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				185					190					195
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				200					205					210
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Arg	Ala	Ser	Thr	Ala
				215					220					225
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				230					235					240
Thr	Asn	Ser	Glu	Ser	Arg	Thr	Thr	Ser	Asn	Gly	Ala	Gly	Thr	Ala
				245					250					255
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				260					265					270
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ala	Ser	Thr	Ala
				275					280					285

Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	290	295	300
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	305	310	315
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Gly	Thr	Ala	320	325	330
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ile	Ser	Thr	Val	335	340	345
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Pro	Ser	Ser	Gly	Ala	Asn	Thr	Ala	350	355	360
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Asn	Thr	Ala	365	370	375
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ala	Ser	Thr	Ala	380	385	390
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Val	Ser	Thr	Ala	395	400	405
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Ser	Thr	Ala	410	415	420
Thr	Asn	Ser	Asp	Ser	Ser	Thr	Thr	Ser	Ser	Glu	Ala	Ser	Thr	Ala	425	430	435
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Val	Ser	Ser	Gly	Ile	Ser	Thr	Val	440	445	450
Thr	Asn	Ser	Glu	Ser	Ser	Thr	Thr	Ser	Ser	Gly	Ala	Asn	Thr	Ala	455	460	465
Thr	Asn	Ser	Gly	Ser	Ser	Val	Thr	Ser	Ala	Gly	Ser	Gly	Thr	Ala	470	475	480
Ala	Leu	Thr	Gly	Met	His	Thr	Thr	Ser	His	Ser	Ala	Ser	Thr	Ala	485	490	495
Val	Ser	Glu	Ala	Lys	Pro	Gly	Gly	Ser	Leu	Val	Pro	Trp	Glu	Ile	500	505	510
Phe	Leu	Ile	Thr	Leu	Val	Ser	Val	Val	Ala	Ala	Val	Gly	Leu	Phe	515	520	525
Ala	Gly	Leu	Phe	Phe	Cys	Val	Arg	Asn	Ser	Leu	Ser	Leu	Arg	Asn	530	535	540
Thr	Phe	Asn	Thr	Ala	Val	Tyr	His	Pro	His	Gly	Leu	Asn	His	Gly	545	550	555
Leu	Gly	Pro	Gly	Pro	Gly	Gly	Asn	His	Gly	Ala	Pro	His	Arg	Pro	560	565	570

Arg Trp Ser Pro Asn Trp Phe Trp Arg Arg Pro Val Ser Ser Ile  
575 580 585

Ala Met Glu Met Ser Gly Arg Asn Ser Gly Pro  
590 595

<210> 101  
<211> 1728  
<212> DNA  
<213> Homo Sapien

<400> 101  
ggccggacgc ctccgcgtta cgggatgaat taacggcggg ttccgcacgg 50  
  
aggttgtgac ccctacggag cccagcttg cccacgcacc ccactcggcg 100  
tcgcgcggcg tgccctgctt gtcacagggt ggaggctgga actatcaggc 150  
  
tgaaaaacag agtgggtact ctcttctggg aagctggcaa caaatggatg 200  
atgtgatata tgcattccag gggaaggga attgtggtgc ttctgaaccc 250  
atggtcaatt aacgaggcag tttctagcta ctgcacgtac ttcataaagc 300  
aggactctaa aagctttgga atcatggtgt catggaaagg gatttacttt 350  
atactgactc tgttttgggg aagctttttt ggaagcattt tcatgctgag 400  
tcccttttta cctttgatgt ttgtaaaccc atcttggtat cgctggatca 450  
acaaccgcct tgtggcaaca tggctcacc tacctgtggc attattggag 500  
accatgtttg gtgtaaaagt gattataact ggggatgcat ttgttcctgg 550  
agaaagaagt gtcattatca tgaaccatcg gacaagaatg gactggatgt 600  
tcctgtggaa ttgcctgatg cgatatagct acctcagatt ggagaaaatt 650  
tgccctcaaag cgagtctcaa aggtgttcct ggatttggtt gggccatgca 700  
ggctgctgcc tatatcttca ttcataggaa atggaaggat gacaagagcc 750  
atttcgaaga catgattgat tacttttgtg atattcacga accacttcaa 800  
ctcctcatat tcccagaagg gactgatctc acagaaaaca gcaagtctcg 850  
aagtaatgca tttgctgaaa aaaatggact tcagaaatat gaatatgttt 900  
tacatccaag aactacaggc tttacttttg tggtagaccg tctaagagaa 950  
ggtaagaacc ttgatgctgt ccatgatatc actgtggcgt atcctcacia 1000  
cattcctcaa tcagagaagc acctcctcca aggagacttt cccagggaaa 1050  
tccactttca cgtccaccgg tatccaatag acaccctccc cacatccaag 1100  
gaggaccttc aactctggtg ccacaaacgg tgggaagaga aagaagagag 1150

gctgcgttcc ttctatcaag gggagaagaa tttttatttt accggacaga 1200  
gtgtcattcc accttgcaag tctgaactca gggtccttgt ggtcaaattg 1250  
ctctctatac tgtattggac cctgttcagc cctgcaatgt gcctactcat 1300  
atatttgtag agtcttggtta agtggtattt tataatcacc attgtaatct 1350  
ttgtgctgca agagagaata tttggtggac tggagatcat agaacttgca 1400  
tgttaccgac ttttacacaa acagccacat ttaaattcaa agaaaaatga 1450  
gtaagattat aagggttgcc atgtgaaaac ctagagcata ttttggaat 1500  
gttctaaacc tttctaagct cagatgcatt tttgcatgac tatgtcgaat 1550  
atctcttact gccatcatta tttgttaaag atattttgca cttaattttg 1600  
tgggaaaaat attgctacaa ttttttttaa tctctgaatg taatttcgat 1650  
actgtgtaca tagcaggag tgatcggggg gaaataactt gggccagaat 1700  
attattaaac aatcatcagg cttttaaa 1728

<210> 102  
<211> 414  
<212> PRT  
<213> Homo Sapien

<400> 102  
Met His Ser Arg Gly Arg Glu Ile Val Val Leu Leu Asn Pro Trp  
1 5 10 15  
Ser Ile Asn Glu Ala Val Ser Ser Tyr Cys Thr Tyr Phe Ile Lys  
20 25 30  
Gln Asp Ser Lys Ser Phe Gly Ile Met Val Ser Trp Lys Gly Ile  
35 40 45  
Tyr Phe Ile Leu Thr Leu Phe Trp Gly Ser Phe Phe Gly Ser Ile  
50 55 60  
Phe Met Leu Ser Pro Phe Leu Pro Leu Met Phe Val Asn Pro Ser  
65 70 75  
Trp Tyr Arg Trp Ile Asn Asn Arg Leu Val Ala Thr Trp Leu Thr  
80 85 90  
Leu Pro Val Ala Leu Leu Glu Thr Met Phe Gly Val Lys Val Ile  
95 100 105  
Ile Thr Gly Asp Ala Phe Val Pro Gly Glu Arg Ser Val Ile Ile  
110 115 120  
Met Asn His Arg Thr Arg Met Asp Trp Met Phe Leu Trp Asn Cys  
125 130 135

Leu Met Arg Tyr	Ser Tyr Leu Arg Leu	Glu Lys Ile Cys Leu Lys	140	145	150
Ala Ser Leu Lys	Gly Val Pro Gly Phe	Gly Trp Ala Met Gln Ala	155	160	165
Ala Ala Tyr Ile	Phe Ile His Arg Lys	Trp Lys Asp Asp Lys Ser	170	175	180
His Phe Glu Asp	Met Ile Asp Tyr Phe	Cys Asp Ile His Glu Pro	185	190	195
Leu Gln Leu Leu	Ile Phe Pro Glu Gly	Thr Asp Leu Thr Glu Asn	200	205	210
Ser Lys Ser Arg	Ser Asn Ala Phe Ala	Glu Lys Asn Gly Leu Gln	215	220	225
Lys Tyr Glu Tyr	Val Leu His Pro Arg	Thr Thr Gly Phe Thr Phe	230	235	240
Val Val Asp Arg	Leu Arg Glu Gly Lys	Asn Leu Asp Ala Val His	245	250	255
Asp Ile Thr Val	Ala Tyr Pro His Asn	Ile Pro Gln Ser Glu Lys	260	265	270
His Leu Leu Gln	Gly Asp Phe Pro Arg	Glu Ile His Phe His Val	275	280	285
His Arg Tyr Pro	Ile Asp Thr Leu Pro	Thr Ser Lys Glu Asp Leu	290	295	300
Gln Leu Trp Cys	His Lys Arg Trp Glu	Glu Lys Glu Glu Arg Leu	305	310	315
Arg Ser Phe Tyr	Gln Gly Glu Lys Asn	Phe Tyr Phe Thr Gly Gln	320	325	330
Ser Val Ile Pro	Pro Cys Lys Ser Glu	Leu Arg Val Leu Val Val	335	340	345
Lys Leu Leu Ser	Ile Leu Tyr Trp Thr	Leu Phe Ser Pro Ala Met	350	355	360
Cys Leu Leu Ile	Tyr Leu Tyr Ser Leu	Val Lys Trp Tyr Phe Ile	365	370	375
Ile Thr Ile Val	Ile Phe Val Leu Gln	Glu Arg Ile Phe Gly Gly	380	385	390
Leu Glu Ile Ile	Glu Leu Ala Cys Tyr	Arg Leu Leu His Lys Gln	395	400	405
Pro His Leu Asn	Ser Lys Lys Asn Glu		410		



<210> 103  
<211> 2403  
<212> DNA  
<213> Homo Sapien

<400> 103  
cggctcgagc ggctcgagt aagagcctct ccacggctcc tgcgcctgag 50  
acagctggcc tgacctcaa atcatccatc caccctgct gtcattctgtt 100  
ttcatagtgt gagatcaacc cacaggaata tccatggctt ttgtgctcat 150  
tttggttctc agtttctacg agctgggtgc aggacagtgg caagtactg 200  
gaccgggcaa gtttgtccag gccttgggtg gggaggacgc cgtgttctcc 250  
tgctccctct ttcctgagac cagtgcagag gctatggaag tgcggttctt 300  
caggaatcag ttccatgctg tgggtccacct ctacagagat ggggaagact 350  
gggaatctaa gcagatgcca cagtatcgag ggagaactga gtttgtgaag 400  
gactccattg caggggggcg tgtctctcta aggctaaaaa acatcactcc 450  
ctcggacatc ggctgtatg ggtgctggtt cagttcccag atttacgatg 500  
aggaggccac ctgggagctg cgggtggcag cactgggctc acttcctctc 550  
atttccatcg tgggatatgt tgacggaggt atccagttac tctgcctgtc 600  
ctcaggctgg tccccccagc ccacagccaa gtggaaagggt ccacaaggac 650  
aggatttgtc ttcagactcc agagcaaagt cagatgggta cagcctgtat 700  
gatgtggaga tctccattat agtccaggaa aatgctggga gcatattgtg 750  
ttccatccac cttgctgagc agagtcatga ggtggaatcc aaggtattga 800  
taggagagac gtttttccag cctcacctt ggcgcctggc ttctatttta 850  
ctcgggttac tctgtggtgc cctgtgtggt gttgtcatgg ggatgataat 900  
tgttttcttc aaatccaaag ggaaaatcca ggcggaactg gactggagaa 950  
gaaagcacgg acaggcagaa ttgagagacg cccggaaaca cgcagtggag 1000  
gtgactctgg atccagagac ggctcaccgc aagctctgcg tttctgatct 1050  
gaaaactgta acccatagaa aagctcccca ggagggtgcct cactctgaga 1100  
agagatttac aaggaagagt gtggtggctt ctcagggttt ccaagcaggg 1150  
agacattact gggagggtgga cgtgggacaa aatgtagggg ggtatgtggg 1200  
agtgtgtcgg gatgacgtag acagggggaa gaacaatgtg actttgtctc 1250  
ccaacaatgg gtattgggtc ctgagactga caacagaaca tttgtatttc 1300

acattcaatc cccattttat cagcctcccc cccagcaccc ctcttacacg 1350  
 agtaggggtc ttcctggact atgaggggtg gaccatctcc ttcttcaata 1400  
 caaatgacca gtcccttatt tataccctgc tgacatgtca gtttgaaggc 1450  
 ttgttgagac cctatatcca gcatgcgatg tatgacgagg aaaaggggac 1500  
 tcccatattc atatgtccag tgtcctgggg atgagacaga gaagaccctg 1550  
 cttaaagggc cccacaccac agaccagac acagccaagg gagagtgtc 1600  
 ccgacaggtg gccccagctt cctctccgga gcctgcgcac agagagtcac 1650  
 gccccccact ctcttttagg gagctgaggt tcttctgccc tgagccctgc 1700  
 agcagcggca gtcacagctt ccagatgagg ggggattggc ctgaccctgt 1750  
 gggagtccga agccatggct gccctgaagt ggggacggaa tagactcaca 1800  
 ttaggtttag tttgtgaaaa ctccatccag ctaagcgatc ttgaacaagt 1850  
 cacaacctcc caggctcctc atttgctagt cacggacagt gattcctgcc 1900  
 tcacaggtga agattaaaga gacaacgaat gtgaatcatg cttgcagggt 1950  
 tgagggcaca gtgtttgcta atgatgtgtt tttatattat acattttccc 2000  
 accataaact ctgtttgctt attccacatt aatttacttt tctctatacc 2050  
 aaatcaccca tggaatagtt attgaacacc tgctttgtga ggctcaaaga 2100  
 ataaagagga ggtaggattt ttcactgatt ctataagccc agcattacct 2150  
 gataccaaaa ccaggcaaag aaaacagaag aagaggaagg aaaactacag 2200  
 gtccatatcc ctcatataca cagacacaaa aattctaaat aaaattttaa 2250  
 caaattaaac taaacaatat atttaaagat gatataaac tactcagtgt 2300  
 ggtttgtccc acaaatgcag agttggttta atatttaa atcaaccagt 2350  
 gtaattcagc acattaataa agtaaaaaag aaaaccataa aaaaaaaaaa 2400  
 aaa 2403

<210> 104

<211> 466

<212> PRT

<213> Homo Sapien

<400> 104

Met	Ala	Phe	Val	Leu	Ile	Leu	Val	Leu	Ser	Phe	Tyr	Glu	Leu	Val
1				5				10					15	

Ser Gly Gln Trp Gln Val Thr Gly Pro Gly Lys Phe Val Gln Ala

20										25					30				
Leu	Val	Gly	Glu	Asp	Ala	Val	Phe	Ser	Cys	Ser	Leu	Phe	Pro	Glu					
				35					40					45					
Thr	Ser	Ala	Glu	Ala	Met	Glu	Val	Arg	Phe	Phe	Arg	Asn	Gln	Phe					
				50					55					60					
His	Ala	Val	Val	His	Leu	Tyr	Arg	Asp	Gly	Glu	Asp	Trp	Glu	Ser					
				65					70					75					
Lys	Gln	Met	Pro	Gln	Tyr	Arg	Gly	Arg	Thr	Glu	Phe	Val	Lys	Asp					
				80					85					90					
Ser	Ile	Ala	Gly	Gly	Arg	Val	Ser	Leu	Arg	Leu	Lys	Asn	Ile	Thr					
				95					100					105					
Pro	Ser	Asp	Ile	Gly	Leu	Tyr	Gly	Cys	Trp	Phe	Ser	Ser	Gln	Ile					
				110					115					120					
Tyr	Asp	Glu	Glu	Ala	Thr	Trp	Glu	Leu	Arg	Val	Ala	Ala	Leu	Gly					
				125					130					135					
Ser	Leu	Pro	Leu	Ile	Ser	Ile	Val	Gly	Tyr	Val	Asp	Gly	Gly	Ile					
				140					145					150					
Gln	Leu	Leu	Cys	Leu	Ser	Ser	Gly	Trp	Phe	Pro	Gln	Pro	Thr	Ala					
				155					160					165					
Lys	Trp	Lys	Gly	Pro	Gln	Gly	Gln	Asp	Leu	Ser	Ser	Asp	Ser	Arg					
				170					175					180					
Ala	Asn	Ala	Asp	Gly	Tyr	Ser	Leu	Tyr	Asp	Val	Glu	Ile	Ser	Ile					
				185					190					195					
Ile	Val	Gln	Glu	Asn	Ala	Gly	Ser	Ile	Leu	Cys	Ser	Ile	His	Leu					
				200					205					210					
Ala	Glu	Gln	Ser	His	Glu	Val	Glu	Ser	Lys	Val	Leu	Ile	Gly	Glu					
				215					220					225					
Thr	Phe	Phe	Gln	Pro	Ser	Pro	Trp	Arg	Leu	Ala	Ser	Ile	Leu	Leu					
				230					235					240					
Gly	Leu	Leu	Cys	Gly	Ala	Leu	Cys	Gly	Val	Val	Met	Gly	Met	Ile					
				245					250					255					
Ile	Val	Phe	Phe	Lys	Ser	Lys	Gly	Lys	Ile	Gln	Ala	Glu	Leu	Asp					
				260					265					270					
Trp	Arg	Arg	Lys	His	Gly	Gln	Ala	Glu	Leu	Arg	Asp	Ala	Arg	Lys					
				275					280					285					
His	Ala	Val	Glu	Val	Thr	Leu	Asp	Pro	Glu	Thr	Ala	His	Pro	Lys					
				290					295					300					
Leu	Cys	Val	Ser	Asp	Leu	Lys	Thr	Val	Thr	His	Arg	Lys	Ala	Pro					

	305		310		315
Gln Glu Val Pro	His Ser Glu Lys Arg	Phe Thr Arg Lys Ser	Val		
	320		325		330
Val Ala Ser Gln	Gly Phe Gln Ala Gly	Arg His Tyr Trp Glu	Val		
	335		340		345
Asp Val Gly Gln	Asn Val Gly Trp Tyr	Val Gly Val Cys Arg	Asp		
	350		355		360
Asp Val Asp Arg	Gly Lys Asn Asn Val	Thr Leu Ser Pro Asn	Asn		
	365		370		375
Gly Tyr Trp Val	Leu Arg Leu Thr Thr	Glu His Leu Tyr Phe	Thr		
	380		385		390
Phe Asn Pro His	Phe Ile Ser Leu Pro	Pro Ser Thr Pro Pro	Thr		
	395	-	400		405
Arg Val Gly Val	Phe Leu Asp Tyr Glu	Gly Gly Thr Ile Ser	Phe		
	410		415		420
Phe Asn Thr Asn	Asp Gln Ser Leu Ile	Tyr Thr Leu Leu Thr	Cys		
	425		430		435
Gln Phe Glu Gly	Leu Leu Arg Pro Tyr	Ile Gln His Ala Met	Tyr		
	440		445		450
Asp Glu Glu Lys	Gly Thr Pro Ile Phe	Ile Cys Pro Val Ser	Trp		
	455		460		465

Gly

<210> 105

<211> 2103

<212> DNA

<213> Homo Sapien

<400> 105

```

ccttcacagg actcttcatt gctggttggc aatgatgtat cggccagatg 50
tggtgagggc taggaaaaga gtttggtggg aaccctgggt tatcggcctc 100
gtcatcttca tatccctgat tgtcctggca gtgtgcattg gactcactgt 150
tcattatgtg agatataatc aaaagaagac ctacaattac tatagcacat 200
tgtcatttac aactgacaaa ctatatgctg agtttggcag agaggcttct 250
aacaatttta cagaaatgag ccagagactt gaatcaatgg tgaaaaatgc 300
atattataaa tctccattaa gggaagaatt tgtcaagtct cagggttatca 350
agttcagtca acagaagcat ggagtgttgg ctcatatgct gttgatttgt 400
agatttcact ctactgagga tcctgaaact gtagataaaa ttgttcaact 450

```

tgttttacat gaaaagctgc aagatgctgt aggaccccct aaagtagatc 500  
ctcactcagt taaaattaaa aaaatcaaca agacagaaac agacagctat 550  
ctaaaccatt gctgcggaac acgaagaagt aaaactctag gtcagagtct 600  
caggatcggt ggtgggacag aagtagaaga gggatgaatgg ccctggcagg 650  
ctagcctgca gtgggatggg agtcatcgct gtggagcaac cttaattaat 700  
gccacatggc ttgtgagtgc tgctcactgt ttacaacat ataagaacct 750  
tgccagatgg actgcttcct ttggagtaac aataaacct tcgaaaatga 800  
aacgggggtct ccggagaata attgtccatg aaaaatacaa acacccatca 850  
catgactatg atatttctct tgcagagctt tctagccctg ttccctacac 900  
aaatgcagta catagagttt gtctccctga tgcctcctat gagtttcaac 950  
caggtgatgt gatgtttgtg acaggatttg gagcactgaa aaatgatggg 1000  
tacagtcaaa atcatcttcg acaagcacag gtgactctca tagacgctac 1050  
aacttgcaat gaacctcaag cttacaatga cgccataact cctagaatgt 1100  
tatgtgctgg ctcccttagaa ggaaaaacag atgcatgcca gggtgactct 1150  
ggaggaccac tggttagttc agatgctaga gatatctggg accttgctgg 1200  
aatagtgagc tggggagatg aatgtgcgaa acccaacaag cctgggtgtt 1250  
atactagagt tacggccttg cgggactgga ttacttcaaa aactggtatc 1300  
taagagacaa aagcctcatg gaacagataa catttttttt tgtttttttg 1350  
gtgtggaggc cattttttaga gatacagaat tggagaagac ttgcaaaaca 1400  
gctagatttg actgatctca ataaactgtt tgcttgatgc atgtattttc 1450  
ttcccagctc tgttccgcac gtaagcatcc tgcttctgcc agatcaactc 1500  
tgtcatctgt gagcaatagt tgaaacttta tgtacataga gaaatagata 1550  
atacaatatt acattacagc ctgtattcat ttgttctcta gaagttttgt 1600  
cagaattttg acttgttgac ataaatttgt aatgcatata tacaatttga 1650  
agcactcctt ttcttcagtt cctcagctcc tctcatttca gcaaatatcc 1700  
attttcaagg tgcagaacaa ggagtgaag aaaatataag aagaaaaaaa 1750  
tcccctacat ttatttgga cagaaaagta ttaggtgttt ttcttagtgg 1800  
aatattagaa atgatcatat tcattatgaa aggtcaagca aagacagcag 1850  
aataccaatc acttcatcat ttaggaagta tgggaactaa gttaaggaag 1900

tccagaaaga agccaagata tctccttatt ttcatttcca aacaactact 1950  
atgataaatg tgaagaagat tctgtttttt tgtgacctat aataattata 2000  
caaacttcat gcaatgtact tggtctaagc aaattaaagc aaatatttat 2050  
ttaacattgt tactgaggat gtcaacatat aacaataaaa tataaatcac 2100  
cca 2103

<210> 106  
<211> 423  
<212> PRT  
<213> Homo Sapien

<400> 106

Met	Met	Tyr	Arg	Pro	Asp	Val	Val	Arg	Ala	Arg	Lys	Arg	Val	Cys	1	5	10	15
Trp	Glu	Pro	Trp	Val	Ile	Gly	Leu	Val	Ile	Phe	Ile	Ser	Leu	Ile	20	25	30	
Val	Leu	Ala	Val	Cys	Ile	Gly	Leu	Thr	Val	His	Tyr	Val	Arg	Tyr	35	40	45	
Asn	Gln	Lys	Lys	Thr	Tyr	Asn	Tyr	Tyr	Ser	Thr	Leu	Ser	Phe	Thr	50	55	60	
Thr	Asp	Lys	Leu	Tyr	Ala	Glu	Phe	Gly	Arg	Glu	Ala	Ser	Asn	Asn	65	70	75	
Phe	Thr	Glu	Met	Ser	Gln	Arg	Leu	Glu	Ser	Met	Val	Lys	Asn	Ala	80	85	90	
Phe	Tyr	Lys	Ser	Pro	Leu	Arg	Glu	Glu	Phe	Val	Lys	Ser	Gln	Val	95	100	105	
Ile	Lys	Phe	Ser	Gln	Gln	Lys	His	Gly	Val	Leu	Ala	His	Met	Leu	110	115	120	
Leu	Ile	Cys	Arg	Phe	His	Ser	Thr	Glu	Asp	Pro	Glu	Thr	Val	Asp	125	130	135	
Lys	Ile	Val	Gln	Leu	Val	Leu	His	Glu	Lys	Leu	Gln	Asp	Ala	Val	140	145	150	
Gly	Pro	Pro	Lys	Val	Asp	Pro	His	Ser	Val	Lys	Ile	Lys	Lys	Ile	155	160	165	
Asn	Lys	Thr	Glu	Thr	Asp	Ser	Tyr	Leu	Asn	His	Cys	Cys	Gly	Thr	170	175	180	
Arg	Arg	Ser	Lys	Thr	Leu	Gly	Gln	Ser	Leu	Arg	Ile	Val	Gly	Gly	185	190	195	
Thr	Glu	Val	Glu	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln				

200										205				210			
Trp	Asp	Gly	Ser	His	Arg	Cys	Gly	Ala	Thr	Leu	Ile	Asn	Ala	Thr			
				215					220					225			
Trp	Leu	Val	Ser	Ala	Ala	His	Cys	Phe	Thr	Thr	Tyr	Lys	Asn	Pro			
				230					235					240			
Ala	Arg	Trp	Thr	Ala	Ser	Phe	Gly	Val	Thr	Ile	Lys	Pro	Ser	Lys			
				245					250					255			
Met	Lys	Arg	Gly	Leu	Arg	Arg	Ile	Ile	Val	His	Glu	Lys	Tyr	Lys			
				260					265					270			
His	Pro	Ser	His	Asp	Tyr	Asp	Ile	Ser	Leu	Ala	Glu	Leu	Ser	Ser			
				275					280					285			
Pro	Val	Pro	Tyr	Thr	Asn	Ala	Val	His	Arg	Val	Cys	Leu	Pro	Asp			
				290					295					300			
Ala	Ser	Tyr	Glu	Phe	Gln	Pro	Gly	Asp	Val	Met	Phe	Val	Thr	Gly			
				305					310					315			
Phe	Gly	Ala	Leu	Lys	Asn	Asp	Gly	Tyr	Ser	Gln	Asn	His	Leu	Arg			
				320					325					330			
Gln	Ala	Gln	Val	Thr	Leu	Ile	Asp	Ala	Thr	Thr	Cys	Asn	Glu	Pro			
				335					340					345			
Gln	Ala	Tyr	Asn	Asp	Ala	Ile	Thr	Pro	Arg	Met	Leu	Cys	Ala	Gly			
				350					355					360			
Ser	Leu	Glu	Gly	Lys	Thr	Asp	Ala	Cys	Gln	Gly	Asp	Ser	Gly	Gly			
				365					370					375			
Pro	Leu	Val	Ser	Ser	Asp	Ala	Arg	Asp	Ile	Trp	Tyr	Leu	Ala	Gly			
				380					385					390			
Ile	Val	Ser	Trp	Gly	Asp	Glu	Cys	Ala	Lys	Pro	Asn	Lys	Pro	Gly			
				395					400					405			
Val	Tyr	Thr	Arg	Val	Thr	Ala	Leu	Arg	Asp	Trp	Ile	Thr	Ser	Lys			
				410					415					420			

Thr Gly Ile

<210> 107

<211> 2397

<212> DNA

<213> Homo Sapien

<400> 107

agagaaagaa gcgtctccag ctgaagccaa tgcagccctc cggctctccg 50

cgaagaagtt ccctgccccg atgagcccc gccgtgcgtc cccgactatc 100

cccagggcggg cgtggggcac cgggcccagc gccgacgac gctgccgttt 150  
tgcccttggg agtaggatgt ggtgaaagga tggggcttct cccttacggg 200  
gctcacaatg gccagagaag attccgtgaa gtgtctgcgc tgcctgctct 250  
acgccctcaa tctgctcttt tggttaatgt ccatcagtgt gttggcagtt 300  
tctgcttgga tgagggacta cctaaataat gttctcactt taactgcaga 350  
aacgagggta gaggaagcag tcattttgac ttactttcct gtggttcac 400  
cggtcatgat tgctgtttgc tgtttcctta tcattgtggg gatgttagga 450  
tattgtggaa cggtgaaaag aaatctgttg cttcttgcat ggtacttttg 500  
aagtttgctt gtcattttct gtgtagaact ggcttgtggc gtttggacat 550  
atgaacagga acttatgggt ccagtacaat ggtcagatat ggtcactttg 600  
aaagccagga tgacaaatta tggattacct agatatcggg ggcttactca 650  
tgcttggaat ttttttcaga gagagttaa gtgctgtgga gtagtatatt 700  
tcactgactg gttggaaatg acagagatgg actggcccc agattcctgc 750  
tgtgttagag aattcccagg atgttccaaa caggcccacc aggaagatct 800  
cagtgcctt tatcaagagg gttgtgggaa gaaaatgtat tcctttttga 850  
gaggaaccaa acaactgcag gtgctgaggt ttctgggaat ctccattggg 900  
gtgacacaaa tcctggccat gattctcacc attactctgc tctgggctct 950  
gtattatgat agaagggagc ctgggacaga ccaaagatg tccttgaaga 1000  
atgacaactc tcagcacctg tcatgtccct cagtagaact gttgaaacca 1050  
agcctgtcaa gaatctttga .acacacatcc .atggcaaaca gctttaatac 1100  
acactttgag atggaggagt tataaaaaga aatgtcacag aagaaaacca 1150  
caaacttggt ttattggact tgtgaat ttt tgagtacata ctatgtgttt 1200  
cagaaatatg tagaaataaa aatgttgcca taaaataaca cctaagcata 1250  
tactattcta tgctttaaaa tgaggatgga aaagtttcat gtcataagtc 1300  
accacctgga caataattga tgcccttaaa atgctgaaga cagatgtcat 1350  
accactgtg tagcctgtgt atgactttta ctgaacacag ttatgttttg 1400  
aggcagcatg gtttgattag catttccgca tccatgcaaa cgagtcacat 1450  
atgggtgggac tggagccata gtaaagggtg atttacttct accaactagt 1500  
atataaagta ctaattaaat gctaacatag gaagttagaa aatactaata 1550



acttttatta ctcagcgatc tattcttctg atgctaaata aattatatat 1600  
cagaaaactt tcaatattgg tgactaccta aatgtgattt ttgctgggta 1650  
ctaaaatatt cttaccactt aaaagagcaa gctaacacat tgtcttaagc 1700  
tgatcaggga ttttttgtat ataagtctgt gttaaatctg tataattcag 1750  
tcgatttcag ttctgataat gttaagaata accattatga aaaggaaaat 1800  
ttgtcctgta tagcatcatt attttttagcc tttcctgtta ataaagcttt 1850  
actattctgt cctgggctta tattacacat ataactgtta tttaaatact 1900  
taaccactaa ttttgaaaat taccagtgtg atacatagga atcattattc 1950  
agaatgtagt ctgggtcttta ggaagtatta ataagaaaat ttgcacataa 2000  
cttagttgat tcagaaagga cttgtatgct gtttttctcc caaatgaaga 2050  
ctctttttga cactaaacac tttttaaaaa gcttatcttt gccttctcca 2100  
aacaagaagc aatagtctcc aagtcaatat aaattctaca gaaaatagtg 2150  
ttctttttct ccagaaaaat gcttgtgaga atcattaaaa catgtgacaa 2200  
tttagagatt ctttgtttta tttcactgat taatatactg tggcaaatta 2250  
cacagattat taaatttttt tacaagagta tagtatattt atttgaaatg 2300  
ggaaaagtgc attttactgt attttgtgta ttttgtttat ttctcagaat 2350  
atggaaagaa aattaaaatg tgtcaataaa tattttctag agagtaa 2397

<210> 108

<211> 305

<212> PRT

<213> Homo Sapien

<400> 108

Met	Ala	Arg	Glu	Asp	Ser	Val	Lys	Cys	Leu	Arg	Cys	Leu	Leu	Tyr
1				5					10					15
Ala	Leu	Asn	Leu	Leu	Phe	Trp	Leu	Met	Ser	Ile	Ser	Val	Leu	Ala
				20					25					30
Val	Ser	Ala	Trp	Met	Arg	Asp	Tyr	Leu	Asn	Asn	Val	Leu	Thr	Leu
				35					40					45
Thr	Ala	Glu	Thr	Arg	Val	Glu	Glu	Ala	Val	Ile	Leu	Thr	Tyr	Phe
				50					55					60
Pro	Val	Val	His	Pro	Val	Met	Ile	Ala	Val	Cys	Cys	Phe	Leu	Ile
				65					70					75
Ile	Val	Gly	Met	Leu	Gly	Tyr	Cys	Gly	Thr	Val	Lys	Arg	Asn	Leu
				80					85					90

Leu	Leu	Leu	Ala	Trp	Tyr	Phe	Gly	Ser	Leu	Leu	Val	Ile	Phe	Cys	
				95					100					105	
Val	Glu	Leu	Ala	Cys	Gly	Val	Trp	Thr	Tyr	Glu	Gln	Glu	Leu	Met	
				110					115					120	
Val	Pro	Val	Gln	Trp	Ser	Asp	Met	Val	Thr	Leu	Lys	Ala	Arg	Met	
				125					130					135	
Thr	Asn	Tyr	Gly	Leu	Pro	Arg	Tyr	Arg	Trp	Leu	Thr	His	Ala	Trp	
				140					145					150	
Asn	Phe	Phe	Gln	Arg	Glu	Phe	Lys	Cys	Cys	Gly	Val	Val	Tyr	Phe	
				155					160					165	
Thr	Asp	Trp	Leu	Glu	Met	Thr	Glu	Met	Asp	Trp	Pro	Pro	Asp	Ser	
				170					175					180	
Cys	Cys	Val	Arg	Glu	Phe	Pro	Gly	Cys	Ser	Lys	Gln	Ala	His	Gln	
				185					190					195	
Glu	Asp	Leu	Ser	Asp	Leu	Tyr	Gln	Glu	Gly	Cys	Gly	Lys	Lys	Met	
				200					205					210	
Tyr	Ser	Phe	Leu	Arg	Gly	Thr	Lys	Gln	Leu	Gln	Val	Leu	Arg	Phe	
				215					220					225	
Leu	Gly	Ile	Ser	Ile	Gly	Val	Thr	Gln	Ile	Leu	Ala	Met	Ile	Leu	
				230					235					240	
Thr	Ile	Thr	Leu	Leu	Trp	Ala	Leu	Tyr	Tyr	Asp	Arg	Arg	Glu	Pro	
				245					250					255	
Gly	Thr	Asp	Gln	Met	Met	Ser	Leu	Lys	Asn	Asp	Asn	Ser	Gln	His	
				260					265					270	
Leu	Ser	Cys	Pro	Ser	Val	Glu	Leu	Leu	Lys	Pro	Ser	Leu	Ser	Arg	
				275					280					285	
Ile	Phe	Glu	His	Thr	Ser	Met	Ala	Asn	Ser	Phe	Asn	Thr	His	Phe	
				290					295					300	
Glu	Met	Glu	Glu	Leu											
				305											

<210> 109

<211> 2339

<212> DNA

<213> Homo Sapien

<400> 109

ccaagggcag agctgtggac accttatccc actcatcctc atcctcttcc 50

tctgataaag ccctaccag tgctgataaa gtctttctcg tgagagccta 100

gaggccttaa aaaaaaaagt gcttgaaaga gaaggggaca aaggaacacc 150

agtattaaga ggattttcca gtgtttctgg cagttggtcc agaaggatgc 200  
ctccattcct gcttctcacc tgcctcttca tcacaggcac ctccgtgtca 250  
cccgtggccc tagatccttg ttctgcttac atcagcctga atgagccctg 300  
gaggaacact gaccaccagt tggatgagtc tcaaggtcct cctctatgtg 350  
acaaccatgt gaatggggag tggtaggact tcacgggcat ggcgaggat 400  
gccatgccta ctttctgcat accagaaaac cactgtggaa cccacgcacc 450  
tgtctggctc aatggcagcc accccctaga aggcgacggc attgtgcaac 500  
gccaggcttg tgccagcttc aatgggaact gctgtctctg gaacaccacg 550  
gtggaagtca aggcttgccc tggaggctac tatgtgtatc gtctgaccaa 600  
gccagcgctc tgcttcacg tctactgtgg tcatttttat .gacatctgcg 650  
acgaggactg ccatggcagc tgctcagata ccagcgagtg cacatgcgct 700  
ccaggaactg tgctaggccc tgacaggcag acatgctttg atgaaaatga 750  
atgtgagcaa aacaacggtg gctgcagtga gatctgtgtg aacctcaaaa 800  
actcctaccg ctgtgagtgt ggggttgccc gtgtgctaag aagtgatggc 850  
aagacttggtg aagacgttga aggatgccac aataacaatg gtggctgcag 900  
ccactcttgc cttggatctg agaaaggcta ccagtgtgaa tgtccccggg 950  
gcttgggtgct gtctgaggat aaccacactt gccaagtccc tgtgttgtgc 1000  
aaatcaaatg ccattgaagt gaacatcccc agggagctgg ttggtggcct 1050  
ggagctcttc ctgaccaaca cctcctgccg aggagtgtcc aacggcacc 1100  
atgtcaacat cctcttctct ctcaagacat gtggtacagt ggtcgatgtg 1150  
gtgaatgaca agattgtggc cagcaacctc gtgacaggtc taccgaagca 1200  
gaccccgggg agcagcgggg acttcatcat ccgaaccagc aagctgctga 1250  
tcccggtgac ctgcgagttt ccacgcctgt acaccatttc tgaaggatac 1300  
gttcccaacc ttcgaaactc cccactggaa atcatgagcc gaaatcatgg 1350  
gatcttccca ttactctgg agatcttcaa ggacaatgag tttgaagagc 1400  
cttaccggga agctctgccc accctcaagc ttcgtgactc cctctacttt 1450  
ggcattgagc ccgtggtgca cgtgagcggc ttggaaagct tggtaggag 1500  
ctgctttgcc acccccacct ccaagatcga cgaggtcctg aaatactacc 1550  
tcatccggga tggctgtgtt tcagatgact cggtaaagca gtacacatcc 1600

cgggatcacc tagcaaagca cttccaggtc cctgtcttca agtttgtggg 1650  
 caaagaccac aaggaagtgt ttctgactg ccgggttctt gtctgtggag 1700  
 tgttggaaga gcgttcccgc tgtgccagg gttgccaccg gcgaatgcgt 1750  
 cgtggggcag gaggagagga ctacagccgt ctacagggcc agacgctaac 1800  
 aggcggcccg atccgcatcg actgggagga ctagtctgta gccatacctc 1850  
 gagtccttgc attggacggc tctgtctttt ggagcttctc cccccaccgc 1900  
 cctctaagaa catctgcaa cagctgggtt cagacttcac actgtgagtt 1950  
 cagactccca gcaccaactc actctgattc tgggtccattc agtgggcaca 2000  
 ggtcacagca ctgctgaaca atgtggcctg ggtgggggttt catctttcta 2050  
 ggggtgaaaa ctaaactgtc caccagaaa gacactcacc ccatttcctt 2100  
 catttctttc ctacacttaa atacctcgtg tatggtgcaa tcagaccaca 2150  
 aaatcagaag ctgggtataa tatttcaagt taaaaccct agaaaaatta 2200  
 aacagttact gaaattatga cttaaatacc caatgactcc ttaaatatgt 2250  
 aaattatagt tataccttga aatttcaatt caaatgcaga ctaattatag 2300  
 ggaatttga agtgtatcaa taaaacagta tataatttt 2339

<210> 110  
 <211> 545  
 <212> PRT  
 <213> Homo Sapien

<400> 110

Met	Pro	Pro	Phe	Leu	Leu	Leu	Thr	Cys	Leu	Phe	Ile	Thr	Gly	Thr	1	5	10	15
Ser	Val	Ser	Pro	Val	Ala	Leu	Asp	Pro	Cys	Ser	Ala	Tyr	Ile	Ser	20	25	30	
Leu	Asn	Glu	Pro	Trp	Arg	Asn	Thr	Asp	His	Gln	Leu	Asp	Glu	Ser	35	40	45	
Gln	Gly	Pro	Pro	Leu	Cys	Asp	Asn	His	Val	Asn	Gly	Glu	Trp	Tyr	50	55	60	
His	Phe	Thr	Gly	Met	Ala	Gly	Asp	Ala	Met	Pro	Thr	Phe	Cys	Ile	65	70	75	
Pro	Glu	Asn	His	Cys	Gly	Thr	His	Ala	Pro	Val	Trp	Leu	Asn	Gly	80	85	90	
Ser	His	Pro	Leu	Glu	Gly	Asp	Gly	Ile	Val	Gln	Arg	Gln	Ala	Cys	95	100	105	

Ala Ser Phe Asn	Gly Asn Cys Cys Leu	Trp Asn Thr Thr Val	Glu
	110	115	120
Val Lys Ala Cys	Pro Gly Gly Tyr Tyr	Val Tyr Arg Leu Thr	Lys
	125	130	135
Pro Ser Val Cys	Phe His Val Tyr Cys	Gly His Phe Tyr Asp	Ile
	140	145	150
Cys Asp Glu Asp	Cys His Gly Ser Cys	Ser Asp Thr Ser Glu	Cys
	155	160	165
Thr Cys Ala Pro	Gly Thr Val Leu Gly	Pro Asp Arg Gln Thr	Cys
	170	175	180
Phe Asp Glu Asn	Glu Cys Glu Gln Asn	Asn Gly Gly Cys Ser	Glu
	185	190	195
Ile Cys Val Asn	Leu Lys Asn Ser Tyr	Arg Cys Glu Cys Gly	Val
	200	205	210
Gly Arg Val Leu	Arg Ser Asp Gly Lys	Thr Cys Glu Asp Val	Glu
	215	220	225
Gly Cys His Asn	Asn Asn Gly Gly Cys	Ser His Ser Cys Leu	Gly
	230	235	240
Ser Glu Lys Gly	Tyr Gln Cys Glu Cys	Pro Arg Gly Leu Val	Leu
	245	250	255
Ser Glu Asp Asn	His Thr Cys Gln Val	Pro Val Leu Cys Lys	Ser
	260	265	270
Asn Ala Ile Glu	Val Asn Ile Pro Arg	Glu Leu Val Gly Gly	Leu
	275	280	285
Glu Leu Phe Leu	Thr Asn Thr Ser Cys	Arg Gly Val Ser Asn	Gly
	290	295	300
Thr His Val Asn	Ile Leu Phe Ser Leu	Lys Thr Cys Gly Thr	Val
	305	310	315
Val Asp Val Val	Asn Asp Lys Ile Val	Ala Ser Asn Leu Val	Thr
	320	325	330
Gly Leu Pro Lys	Gln Thr Pro Gly Ser	Ser Gly Asp Phe Ile	Ile
	335	340	345
Arg Thr Ser Lys	Leu Leu Ile Pro Val	Thr Cys Glu Phe Pro	Arg
	350	355	360
Leu Tyr Thr Ile	Ser Glu Gly Tyr Val	Pro Asn Leu Arg Asn	Ser
	365	370	375
Pro Leu Glu Ile	Met Ser Arg Asn His	Gly Ile Phe Pro Phe	Thr
	380	385	390

Leu	Glu	Ile	Phe	Lys	Asp	Asn	Glu	Phe	Glu	Glu	Pro	Tyr	Arg	Glu	
				395					400					405	
Ala	Leu	Pro	Thr	Leu	Lys	Leu	Arg	Asp	Ser	Leu	Tyr	Phe	Gly	Ile	
				410					415					420	
Glu	Pro	Val	Val	His	Val	Ser	Gly	Leu	Glu	Ser	Leu	Val	Glu	Ser	
				425					430					435	
Cys	Phe	Ala	Thr	Pro	Thr	Ser	Lys	Ile	Asp	Glu	Val	Leu	Lys	Tyr	
				440					445					450	
Tyr	Leu	Ile	Arg	Asp	Gly	Cys	Val	Ser	Asp	Asp	Ser	Val	Lys	Gln	
				455					460					465	
Tyr	Thr	Ser	Arg	Asp	His	Leu	Ala	Lys	His	Phe	Gln	Val	Pro	Val	
				470					475					480	
Phe	Lys	Phe	Val	Gly	Lys	Asp	His	Lys	Glu	Val	Phe	Leu	His	Cys	
				485					490					495	
Arg	Val	Leu	Val	Cys	Gly	Val	Leu	Asp	Glu	Arg	Ser	Arg	Cys	Ala	
				500					505					510	
Gln	Gly	Cys	His	Arg	Arg	Met	Arg	Arg	Gly	Ala	Gly	Gly	Glu	Asp	
				515					520					525	
Ser	Ala	Gly	Leu	Gln	Gly	Gln	Thr	Leu	Thr	Gly	Gly	Pro	Ile	Arg	
				530					535					540	
Ile	Asp	Trp	Glu	Asp											
				545											

<210> 111  
 <211> 2063  
 <212> DNA  
 <213> Homo Sapien

<400> 111  
 gagagaggca gcagcttgct cagcggacaa ggatgctggg cgtgagggac 50  
 caaggcctgc cctgcactcg ggcctcctcc agccagtgct gaccagggac 100  
 ttctgacctg ctggccagcc aggacctgtg tggggaggcc ctctgctgc 150  
 cttggggtga caatctcagc tccaggctac agggagaccg ggaggatcac 200  
 agagccagca tgttacagga tcctgacagt gatcaacctc tgaacagcct 250  
 cgatgtcaaa cccctgcgca aaccccgat ccccatggag accttcagaa 300  
 aggtggggat ccccatcatc atagcactac tgagcctggc gagtatcatc 350  
 attgtggttg tcctcatcaa ggtgattctg gataaatact acttcctctg 400  
 cgggcagcct ctccacttca tcccaggaa gcagctgtgt gacggagagc 450

tggactgtcc cttgggggag gacgaggagc actgtgtcaa gagcttcccc 500  
gaagggcctg cagtggcagt ccgcctctcc aaggaccgat ccacactgca 550  
gggtgctggac tcggccacag ggaactgggt ctctgcctgt ttcgacaact 600  
tcacagaagc tctcgtgag acagcctgta ggcagatggg ctacagcaga 650  
gctgtggaga ttggcccaga ccaggatctg gatgttggtg aaatcacaga 700  
aaacagccag gagcttcgca tgcggaactc aagtgggccc tgtctctcag 750  
gctccctggg ctccctgcac tgtcttgctt gtgggaagag cctgaagacc 800  
ccccgtgtgg tgggtgggga ggaggcctct gtggattctt ggccttggca 850  
ggtcagcatc cagtacgaca aacagcacgt ctgtggaggg agcatcctgg 900  
acccccactg ggtcctcagc gcagcccact gcttcaggaa acataccgat 950  
gtgttcaact ggaaggtgcg ggcaggctca gacaaactgg gcagcttccc 1000  
atccctgggt gtggccaaga tcatcatcat tgaattcaac cccatgtacc 1050  
ccaaagacaa tgacatcgcc ctcatgaagc tgcagttccc actcactttc 1100  
tcaggcacag tcaggcccat ctgtctgccc ttctttgatg aggagctcac 1150  
tccagccacc ccactctgga tcattggatg gggctttacg aagcagaatg 1200  
gagggagat gtctgacata ctgctgcagg cgtcagtcca ggtcattgac 1250  
agcacacggt gcaatgcaga cgatgcgtac cagggggaag tcaccgagaa 1300  
gatgatgtgt gcaggcatcc cggaaggggg tgtggacacc tgccaggggtg 1350  
acagtgggtg gcccctgatg taccaatctg accagtggca tgtggtgggc 1400  
atcgttagct ggggctatgg ctgcgggggc ccgagcacc caggagtata 1450  
caccaaggtc tcagcctatc tcaactggat ctacaatgtc tggaaggctg 1500  
agctgtaatg ctgctgcccc ttgagcgtgc tgggagccgc ttccttcctg 1550  
ccctgcccac ctggggatcc cccaaagtca gacacagagc aagagtcccc 1600  
ttgggtacac ccctctgccc acagcctcag catttcttgg agcagcaaag 1650  
ggcctcaatt cctgtaagag accctcgag cccagaggcg cccagaggaa 1700  
gtcagcagcc ctagctcggc cacacttggg gctcccagca tcccaggag 1750  
agacacagcc cactgaacaa ggtctcagg gtattgctaa gccaagaagg 1800  
aactttccca cactactgaa tggaagcagg ctgtcttgta aaagcccaga 1850  
tcactgtggg ctggagagga gaaggaaagg gtctgcgcca gccctgtccg 1900

tcttcaccca tccccaagcc tactagagca agaaaccagt tgtaataataa 1950  
aatgcactgc cctactgttg gtagactac cgttacctac tgttgtcatt 2000  
gttattacag ctatggccac tattattaaa gagctgtgta acatctctgg 2050  
caaaaaaaaaaaa aaa 2063

<210> 112  
<211> 432  
<212> PRT  
<213> Homo Sapien

<400> 112

Met	Leu	Gln	Asp	Pro	Asp	Ser	Asp	Gln	Pro	Leu	Asn	Ser	Leu	Asp	
1				5					10					15	
Val	Lys	Pro	Leu	Arg	Lys	Pro	Arg	Ile	Pro	Met	Glu	Thr	Phe	Arg	
				20					25					30	
Lys	Val	Gly	Ile	Pro	Ile	Ile	Ile	Ala	Leu	Leu	Ser	Leu	Ala	Ser	
				35					40					45	
Ile	Ile	Ile	Val	Val	Val	Leu	Ile	Lys	Val	Ile	Leu	Asp	Lys	Tyr	
				50					55					60	
Tyr	Phe	Leu	Cys	Gly	Gln	Pro	Leu	His	Phe	Ile	Pro	Arg	Lys	Gln	
				65					70					75	
Leu	Cys	Asp	Gly	Glu	Leu	Asp	Cys	Pro	Leu	Gly	Glu	Asp	Glu	Glu	
				80					85					90	
His	Cys	Val	Lys	Ser	Phe	Pro	Glu	Gly	Pro	Ala	Val	Ala	Val	Arg	
				95					100					105	
Leu	Ser	Lys	Asp	Arg	Ser	Thr	Leu	Gln	Val	Leu	Asp	Ser	Ala	Thr	
				110					115					120	
Gly	Asn	Trp	Phe	Ser	Ala	Cys	Phe	Asp	Asn	Phe	Thr	Glu	Ala	Leu	
				125					130					135	
Ala	Glu	Thr	Ala	Cys	Arg	Gln	Met	Gly	Tyr	Ser	Arg	Ala	Val	Glu	
				140					145					150	
Ile	Gly	Pro	Asp	Gln	Asp	Leu	Asp	Val	Val	Glu	Ile	Thr	Glu	Asn	
				155					160					165	
Ser	Gln	Glu	Leu	Arg	Met	Arg	Asn	Ser	Ser	Gly	Pro	Cys	Leu	Ser	
				170					175					180	
Gly	Ser	Leu	Val	Ser	Leu	His	Cys	Leu	Ala	Cys	Gly	Lys	Ser	Leu	
				185					190					195	
Lys	Thr	Pro	Arg	Val	Val	Gly	Gly	Glu	Glu	Ala	Ser	Val	Asp	Ser	
				200					205					210	



Trp	Pro	Trp	Gln	Val	Ser	Ile	Gln	Tyr	Asp	Lys	Gln	His	Val	Cys	
				215					220					225	
Gly	Gly	Ser	Ile	Leu	Asp	Pro	His	Trp	Val	Leu	Thr	Ala	Ala	His	
				230					235					240	
Cys	Phe	Arg	Lys	His	Thr	Asp	Val	Phe	Asn	Trp	Lys	Val	Arg	Ala	
				245					250					255	
Gly	Ser	Asp	Lys	Leu	Gly	Ser	Phe	Pro	Ser	Leu	Ala	Val	Ala	Lys	
				260					265					270	
Ile	Ile	Ile	Ile	Glu	Phe	Asn	Pro	Met	Tyr	Pro	Lys	Asp	Asn	Asp	
				275					280					285	
Ile	Ala	Leu	Met	Lys	Leu	Gln	Phe	Pro	Leu	Thr	Phe	Ser	Gly	Thr	
				290					295					300	
Val	Arg	Pro	Ile	Cys	Leu	Pro	Phe	Phe	Asp	Glu	Glu	Leu	Thr	Pro	
				305					310					315	
Ala	Thr	Pro	Leu	Trp	Ile	Ile	Gly	Trp	Gly	Phe	Thr	Lys	Gln	Asn	
				320					325					330	
Gly	Gly	Lys	Met	Ser	Asp	Ile	Leu	Leu	Gln	Ala	Ser	Val	Gln	Val	
				335					340					345	
Ile	Asp	Ser	Thr	Arg	Cys	Asn	Ala	Asp	Asp	Ala	Tyr	Gln	Gly	Glu	
				350					355					360	
Val	Thr	Glu	Lys	Met	Met	Cys	Ala	Gly	Ile	Pro	Glu	Gly	Gly	Val	
				365					370					375	
Asp	Thr	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Met	Tyr	Gln	Ser	
				380					385					390	
Asp	Gln	Trp	His	Val	Val	Gly	Ile	Val	Ser	Trp	Gly	Tyr	Gly	Cys	
				395					400					405	
Gly	Gly	Pro	Ser	Thr	Pro	Gly	Val	Tyr	Thr	Lys	Val	Ser	Ala	Tyr	
				410					415					420	
Leu	Asn	Trp	Ile	Tyr	Asn	Val	Trp	Lys	Ala	Glu	Leu				
				425					430						

<210> 113

<211> 1768

<212> DNA

<213> Homo Sapien

<400> 113

ggctggactg gaactcctgg tcccaagtga tccacccgcc tcagcctccc 50

aaggtgctgt gattataggt gtaagccacc gtgtctggcc tctgaacaac 100

tttttcagca actaaaaaag ccacaggagt tgaactgcta ggattctgac 150

tatgctgtgg tggctagtgc tcctactcct acctacatta aaatctgttt 200  
tttgttctct tgtaactagc ctttaccttc ctaacacaga ggatctgtca 250  
ctgtggctct ggcccaaacc tgaccttcac tctggaacga gaacagaggt 300  
ttctaccac accgtcccct cgaagccggg gacagcctca ccttgctggc 350  
ctctcgctgg agcagtgcc tcaccaactg tctcacgtct ggaggcactg 400  
actcgggcag tgcaggtagc tgagcctctt ggtagctgcg gctttcaagg 450  
tgggccttgc cctggccgta gaagggattg acaagcccga agatttcata 500  
ggcgatggct ccactgccc aggcattcagc cttgctgtag tcaatcactg 550  
ccctggggcc aggacgggcc gtggacacct gctcagaagc agtgggtgag 600  
acatcacgct gcccgcccat ctaacctttt catgtcctgc acatcacctg 650  
atccatgggc taatctgaac tctgtcccaa ggaaccaga gcttgagtga 700  
gctgtggctc agaccagaa ggggtctgct tagaccacct ggtttatgtg 750  
acaggacttg cattctcctg gaacatgagg gaacgccgga ggaaagcaaa 800  
gtggcagga aggaacttgt gccaaattat gggtcagaaa agatggaggt 850  
gttgggttat cacaaggcat cgagtctcct gcattcagtg gacatgtggg 900  
ggaagggtg ccgatggcg atgacacact cgggactcac ctctggggcc 950  
atcagacagc cgtttccgcc ccgatccacg taccagctgc tgaagggcaa 1000  
ctgcaggccg atgtctcat cagccaggca gcagccaaaa tctgcgatca 1050  
ccagccaggg gcagccgtct gggaaggagc aagcaaagt accatttctc 1100  
ctcccctcct tccctctgag aggcctcct atgtccctac taaagccacc 1150  
agcaagacat agctgacagg ggctaattgg tcagtgttgg ccaggaggt 1200  
cagcaaggcc tgagagctga tcagaagggc ctgctgtgcg aacacggaaa 1250  
tgctccagt aagcacaggc tgcaaatcc ccaggcaaag gactgtgtgg 1300  
ctcaatttaa atcatgttct agtaattgga gctgtccca agaccaaagg 1350  
agctagagct tggttcaa atgatctcaag ggcccttata cccaggaga 1400  
ctttgatttg aatttgaaac cccaaatcca aacctaagaa ccagggtgat 1450  
taagaatcag ttattgccg gtgtgggtgg ctgtaatgcc aacatttttg 1500  
gaggccgagg cgggtagatc acctgaggtc aggagttcaa gaccagcctg 1550  
gccaacatgg tgaaaccct gtctctacta aaaatacaaa aaaactagcc 1600

aggcatggtg gtgtgtgcct gtatcccagc tactcgggag gctgagacag 1650  
 gagaattact tgaacctggg aggtgaagga ggctgagaca ggagaatcac 1700  
 ttcagcctga gcaacacagc gagactctgt ctcagaaaaa ataaaaaaag 1750  
 aattatggtt atttgtaa 1768

<210> 114  
 <211> 109  
 <212> PRT  
 <213> Homo Sapien

<400> 114  
 Met Leu Trp Trp Leu Val Leu Leu Leu Leu Pro Thr Leu Lys Ser  
 1 5 10 15  
 Val Phe Cys Ser Leu Val Thr Ser Leu Tyr Leu Pro Asn Thr Glu  
 20 25 30  
 Asp Leu Ser Leu Trp Leu Trp Pro Lys Pro Asp Leu His Ser Gly  
 35 40 45  
 Thr Arg Thr Glu Val Ser Thr His Thr Val Pro Ser Lys Pro Gly  
 50 55 60  
 Thr Ala Ser Pro Cys Trp Pro Leu Ala Gly Ala Val Pro Ser Pro  
 65 70 75  
 Thr Val Ser Arg Leu Glu Ala Leu Thr Arg Ala Val Gln Val Ala  
 80 85 90  
 Glu Pro Leu Gly Ser Cys Gly Phe Gln Gly Gly Pro Cys Pro Gly  
 95 100 105  
 Arg Arg Arg Asp

<210> 115  
 <211> 1197  
 <212> DNA  
 <213> Homo Sapien

<400> 115  
 cagcagtggc ctctcagtc tctcaaagca aggaaagagt actgtgtgct 50  
 gagagaccat ggcaaagaat cctccagaga attgtgaaga ctgtcacatt 100  
 ctaaatgcag aagcttttaa atccaagaaa atatgtaaat cacttaagat 150  
 ttgtggactg gtgttttgga tcctggccct aactctaatt gtcctgtttt 200  
 gggggagcaa gcacttctgg ccggaggtac ccaaaaaagc ctatgacatg 250  
 gagcacactt tctacagcaa tggagagaag aagaagattt acatggaaat 300  
 tgatcctgtg accagaactg aaatatcag aagcggaaat ggcactgatg 350

aaacattgga agtgcacgac tttaaaaacg gatacactgg catctacttc 400  
 gtgggtcttc aaaaatgttt tatcaaaact cagattaaag tgattcctga 450  
 attttctgaa ccagaagagg aaatagatga gaatgaagaa attaccacaa 500  
 ctttctttga acagtcagtg atttgggtcc cagcagaaaa gcctattgaa 550  
 aaccgagatt ttcttaaaaa ttccaaaatt ctggagattt gtgataacgt 600  
 gaccatgtat tggatcaatc cactctaat atcagtttct gagttacaag 650  
 actttgagga ggaggagaa gatcttcact ttcctgccaa cgaaaaaaaa 700  
 gggattgaac aaaatgaaca gtgggtggtc cctcaagtga aagtagagaa 750  
 gaccgctcac gccagacaag caagtgagga agaacttcca ataaatgact 800  
 atactgaaaa tggaatagaa tttgatccca tgctggatga gagaggttat 850  
 tgttgtattt actgccgtcg aggcaaccgc tattgccgcc gcgtctgtga 900  
 acctttacta ggctactacc catatccata ctgctaccaa ggaggacgag 950  
 tcatctgtcg tgtcatcatg ccttgtaact ggtgggtggc ccgcatgctg 1000  
 gggaggtct aataggaggt ttgagctcaa atgcttaaac tgctggcaac 1050  
 atataataaa tgcattgctat tcaatgaatt tctgcctatg aggcattctg 1100  
 cccctggtag ccagctctcc agaattactt gtaggtaatt cctctcttca 1150  
 tgttctaata aacttctaca ttatcaccaa aaaaaaaaaa aaaaaaa 1197

<210> 116

<211> 317

<212> PRT

<213> Homo Sapien

<400> 116

Met	Ala	Lys	Asn	Pro	Pro	Glu	Asn	Cys	Glu	Asp	Cys	His	Ile	Leu
1				5					10					15
Asn	Ala	Glu	Ala	Phe	Lys	Ser	Lys	Lys	Ile	Cys	Lys	Ser	Leu	Lys
				20					25					30
Ile	Cys	Gly	Leu	Val	Phe	Gly	Ile	Leu	Ala	Leu	Thr	Leu	Ile	Val
				35					40					45
Leu	Phe	Trp	Gly	Ser	Lys	His	Phe	Trp	Pro	Glu	Val	Pro	Lys	Lys
				50					55					60
Ala	Tyr	Asp	Met	Glu	His	Thr	Phe	Tyr	Ser	Asn	Gly	Glu	Lys	Lys
				65					70					75
Lys	Ile	Tyr	Met	Glu	Ile	Asp	Pro	Val	Thr	Arg	Thr	Glu	Ile	Phe

80					85					90				
Arg	Ser	Gly	Asn	Gly	Thr	Asp	Glu	Thr	Leu	Glu	Val	His	Asp	Phe
				95					100					105
Lys	Asn	Gly	Tyr	Thr	Gly	Ile	Tyr	Phe	Val	Gly	Leu	Gln	Lys	Cys
				110					115					120
Phe	Ile	Lys	Thr	Gln	Ile	Lys	Val	Ile	Pro	Glu	Phe	Ser	Glu	Pro
				125					130					135
Glu	Glu	Glu	Ile	Asp	Glu	Asn	Glu	Glu	Ile	Thr	Thr	Thr	Phe	Phe
				140					145					150
Glu	Gln	Ser	Val	Ile	Trp	Val	Pro	Ala	Glu	Lys	Pro	Ile	Glu	Asn
				155					160					165
Arg	Asp	Phe	Leu	Lys	Asn	Ser	Lys	Ile	Leu	Glu	Ile	Cys	Asp	Asn
				170					175					180
Val	Thr	Met	Tyr	Trp	Ile	Asn	Pro	Thr	Leu	Ile	Ser	Val	Ser	Glu
				185					190					195
Leu	Gln	Asp	Phe	Glu	Glu	Glu	Gly	Glu	Asp	Leu	His	Phe	Pro	Ala
				200					205					210
Asn	Glu	Lys	Lys	Gly	Ile	Glu	Gln	Asn	Glu	Gln	Trp	Val	Val	Pro
				215					220					225
Gln	Val	Lys	Val	Glu	Lys	Thr	Arg	His	Ala	Arg	Gln	Ala	Ser	Glu
				230					235					240
Glu	Glu	Leu	Pro	Ile	Asn	Asp	Tyr	Thr	Glu	Asn	Gly	Ile	Glu	Phe
				245					250					255
Asp	Pro	Met	Leu	Asp	Glu	Arg	Gly	Tyr	Cys	Cys	Ile	Tyr	Cys	Arg
				260					265					270
Arg	Gly	Asn	Arg	Tyr	Cys	Arg	Arg	Val	Cys	Glu	Pro	Leu	Leu	Gly
				275					280					285
Tyr	Tyr	Pro	Tyr	Pro	Tyr	Cys	Tyr	Gln	Gly	Gly	Arg	Val	Ile	Cys
				290					295					300
Arg	Val	Ile	Met	Pro	Cys	Asn	Trp	Trp	Val	Ala	Arg	Met	Leu	Gly
				305					310					315

Arg Val

<210> 117

<211> 2121

<212> DNA

<213> Homo Sapien

<400> 117

gagctcccct caggagcgcg ttagcttcac accttcggca gcaggagggc 50

ggcagcttct cgcaggcggc agggcgggcg gccaggatca tgtccaccac 100  
cacatgccaa gtggtggcgt tcctcctgtc catcctgggg ctggccggct 150  
gcatcgcggc caccgggatg gacatgtgga gcaccagga cctgtacgac 200  
aaccctgtca cctccgtgtt ccagtacgaa gggctctgga ggagctgcgt 250  
gaggcagagt tcaggcttca ccgaatgcag gccctatttc accatcctgg 300  
gacttccagc catgctgcag gcagtgcgag ccctgatgat cgtaggcatc 350  
gtcctgggtg ccattggcct cctggtatcc atctttgccc tgaaatgcat 400  
ccgcattggc agcatggagg actctgccaa agccaacatg aactgacct 450  
ccgggatcat gttcattgtc tcaggctctt gtgcaattgc tggagtgtct 500  
gtgtttgcc aatgctgggt gactaacttc tggatgtcca cagctaacat 550  
gtacaccggc atgggtggga tggcgcagac tgttcagacc aggtacacat 600  
ttggtgcggc tctgttcgtg ggctgggtcg ctggaggcct cacactaatt 650  
gggggtgtga tgatgtgcat cgctgccgg ggctggcac cagaagaaac 700  
caactacaaa gccgtttctt atcatgcctc aggccacagt gttgcctaca 750  
agcctggagg cttcaaggcc agcactggct ttgggtccaa caccaaaaac 800  
aagaagatat acgatggagg tgccgcaca gaggacgagg tacaatctta 850  
tccttccaag cagactatg tgtaatgtc taagacctct cagcacgggc 900  
ggaagaaact cccggagagc tcacccaaaa aacaaggaga tcccatctag 950  
atctcttctt gcttttgact cacagctgga agttagaaaa gcctcgattt 1000  
catctttgga gaggccaaat ggtcttagcc tcagtctctg tctctaaata 1050  
ttccaccata aaacagctga gttatttatg aattagaggc tatagctcac 1100  
atcttcaatc ctctatttct ttttttaaata ataactttct actctgatga 1150  
gagaatgtgg ttttaatctc tctctcacat tttgatgatt tagacagact 1200  
ccccctcttc ctctagtca ataaacccat tgatgatcta tttcccagct 1250  
tatccccaag aaaacttttg aaaggaaaga gtagaccxaa agatgttatt 1300  
ttctgctgtt tgaattttgt ctccccaccc ccaacttggc tagtaataaa 1350  
cacttactga agaagaagca ataagagaaa gatatttgta atctctccag 1400  
cccatgatct cggttttctt acactgtgat cttaaaagtt accaaaccaa 1450

agtcattttc agtttgaggc aaccaaacct ttctactgct gttgacatct 1500  
 tcttattaca gcaacacccat tctaggagtt tcctgagctc tccactggag 1550  
 tcctctttct gtcgcggggtc agaaattgtc cctagatgaa tgagaaaatt 1600  
 atttttttta atttaagtcc taaatatagt taaaataaat aatgttttag 1650  
 taaaatgata cactatctct gtgaaatagc ctcacccta catgtggata 1700  
 gaaggaaatg aaaaaataat tgctttgaca ttgtctatat ggtactttgt 1750  
 aaagtcatgc ttaagtacaa attccatgaa aagctcacac ctgtaatcct 1800  
 agcacttttg gaggctgagg aggaaggatc acttgagccc agaagttcga 1850  
 gactagcctg ggcaacatgg agaagccctg tctctacaaa atacagagag 1900  
 aaaaaatcag ccagtcatgg tggcatacac ctgtagtccc agcattccgg 1950  
 gaggctgagg tgggaggatc acttgagccc agggaggttg gggctgcagt 2000  
 gagccatgat cacaccactg cactccagcc aggtgacata gcgagatcct 2050  
 gtctaaaaaa ataaaaaata aataatggaa cacagcaagt cctaggaagt 2100  
 aggttaaaac taattcttta a 2121

<210> 118

<211> 261

<212> PRT

<213> Homo Sapien

<400> 118

Met	Ser	Thr	Thr	Thr	Cys	Gln	Val	Val	Ala	Phe	Leu	Leu	Ser	Ile
1				5					10					15
Leu	Gly	Leu	Ala	Gly	Cys	Ile	Ala	Ala	Thr	Gly	Met	Asp	Met	Trp
				20					25					30
Ser	Thr	Gln	Asp	Leu	Tyr	Asp	Asn	Pro	Val	Thr	Ser	Val	Phe	Gln
				35					40					45
Tyr	Glu	Gly	Leu	Trp	Arg	Ser	Cys	Val	Arg	Gln	Ser	Ser	Gly	Phe
				50					55					60
Thr	Glu	Cys	Arg	Pro	Tyr	Phe	Thr	Ile	Leu	Gly	Leu	Pro	Ala	Met
				65					70					75
Leu	Gln	Ala	Val	Arg	Ala	Leu	Met	Ile	Val	Gly	Ile	Val	Leu	Gly
				80					85					90
Ala	Ile	Gly	Leu	Leu	Val	Ser	Ile	Phe	Ala	Leu	Lys	Cys	Ile	Arg
				95					100					105
Ile	Gly	Ser	Met	Glu	Asp	Ser	Ala	Lys	Ala	Asn	Met	Thr	Leu	Thr
				110					115					120

Ser	Gly	Ile	Met	Phe	Ile	Val	Ser	Gly	Leu	Cys	Ala	Ile	Ala	Gly	
				125					130					135	
Val	Ser	Val	Phe	Ala	Asn	Met	Leu	Val	Thr	Asn	Phe	Trp	Met	Ser	
				140					145					150	
Thr	Ala	Asn	Met	Tyr	Thr	Gly	Met	Gly	Gly	Met	Val	Gln	Thr	Val	
				155					160					165	
Gln	Thr	Arg	Tyr	Thr	Phe	Gly	Ala	Ala	Leu	Phe	Val	Gly	Trp	Val	
				170					175					180	
Ala	Gly	Gly	Leu	Thr	Leu	Ile	Gly	Gly	Val	Met	Met	Cys	Ile	Ala	
				185					190					195	
Cys	Arg	Gly	Leu	Ala	Pro	Glu	Glu	Thr	Asn	Tyr	Lys	Ala	Val	Ser	
				200					205					210	
Tyr	His	Ala	Ser	Gly	His	Ser	Val	Ala	Tyr	Lys	Pro	Gly	Gly	Phe	
				215					220					225	
Lys	Ala	Ser	Thr	Gly	Phe	Gly	Ser	Asn	Thr	Lys	Asn	Lys	Lys	Ile	
				230					235					240	
Tyr	Asp	Gly	Gly	Ala	Arg	Thr	Glu	Asp	Glu	Val	Gln	Ser	Tyr	Pro	
				245					250					255	
Ser	Lys	His	Asp	Tyr	Val										
				260											

<210> 119  
 <211> 2010  
 <212> DNA  
 <213> Homo Sapien

<400> 119  
 ggaaaaactg ttctcttctg tggcacagag aaccctgctt caaagcagaa 50  
 gtagcagttc cggagtccag ctggctaaaa ctcattccag aggataatgg 100  
 caacccatgc cttagaaatc gctgggctgt ttcttggtgg tgttggaatg 150  
 gtgggcacag tggctgtcac tgtcatgcct cagtggagag tgcggcctt 200  
 cattgaaaac aacatcgtgg tttttgaaaa cttctgggaa ggactgtgga 250  
 tgaattgcgt gaggcaggct aacatcagga tgcagtgcaa aatctatgat 300  
 tccctgctgg ctctttctcc ggacctacag gcagccagag gactgatgtg 350  
 tgctgcttcc gtgatgtcct tcttggttt catgatggcc atccttgga 400  
 tgaaatgcac caggtgcacg ggggacaatg agaaggtgaa ggctcacatt 450  
 ctgctgacgg ctggaatcat cttcatcatc acgggcatgg tgggtgctcat 500



ccctgtgagc tgggttgcca atgccatcat cagagatttc tataactcaa 550  
tagtgaatgt tgcccaaaaa cgtgagcttg gagaagctct ctacttagga 600  
tggaccacgg cactggtgct gattgttgga ggagctctgt tctgctgcgt 650  
tttttgttgc aacgaaaaga gcagtagcta cagatactcg ataccttccc 700  
atcgcacaaac ccaaaaaagt tatcacaccg gaaagaagtc accgagcgtc 750  
tactccagaa gtcagtatgt gtagttgtgt atgttttttt aactttacta 800  
taaagccatg caaatgacaa aaatctatat tactttctca aaatggaccc 850  
caaagaaact ttgatttact gttcttaact gcctaattctt aattacagga 900  
actgtgcacg agctatttat gattctataa gctatttcag cagaatgaga 950  
tattaaaccc aatgctttga ttgttctaga aagtatagta atttgttttc 1000  
taagggtggt caagcatcta ctctttttat catttacttc aaaatgacat 1050  
tgctaaagac tgcattattht tactactgta atttctccac gacatagcat 1100  
tatgtacata gatgagtgtg acattttatat ctcacataga gacatgctta 1150  
tatggttttta tttaaaatga aatgccagtc cattacactg aataaataga 1200  
actcaactat tgctttttcag ggaaatcatg gataggggtg aagaaggtta 1250  
ctattaattg tttaaaaaca gcttagggat taatgtcctc catttataat 1300  
gaagattaaa atgaaggctt taatcagcat tgtaaaggaa attgaatggc 1350  
tttctgatat gctgtttttt agcctaggag ttagaaatcc taacttcttt 1400  
atcctcttct cccagaggct ttttttttct tgtgtattaa attaacattt 1450  
ttaaaacgca gatattttgt caaggggctt tgcattcaaa ctgcttttcc 1500  
agggctatac tcagaagaaa gataaaagtg tgatctaaga aaaagtgatg 1550  
gttttaggaa agtgaaaata tttttgtttt tgtatttgaa gaagaatgat 1600  
gcattttgac aagaaatcat atatgtatgg atatatttta ataagtattt 1650  
gagtacagac tttgagggtt catcaatata aataaaagag cagaaaaata 1700  
tgtcttggtt ttcatttgct taccaaaaaa acaacaacaa aaaaagttgt 1750  
cctttgagaa cttcacctgc tcctatgtgg gtacctgagt caaaattgtc 1800  
atttttgttc tgtgaaaaat aaatttcctt cttgtaccat ttctgtttag 1850  
ttttactaaa atctgtaaat actgtatttt tctgtttatt ccaaatttga 1900  
tgaaactgac aatccaattt gaaagtttgt gtcgacgtct gtctagctta 1950

aatgaatgtg ttctatttgc tttatacatt tatattaata aattgtacat 2000

ttttctaatt 2010

<210> 120

<211> 225

<212> PRT

<213> Homo Sapien

<400> 120

Met	Ala	Thr	His	Ala	Leu	Glu	Ile	Ala	Gly	Leu	Phe	Leu	Gly	Gly
1				5					10					15

Val	Gly	Met	Val	Gly	Thr	Val	Ala	Val	Thr	Val	Met	Pro	Gln	Trp
				20					25					30

Arg	Val	Ser	Ala	Phe	Ile	Glu	Asn	Asn	Ile	Val	Val	Phe	Glu	Asn
				35					40					45

Phe	Trp	Glu	Gly	Leu	Trp	Met	Asn	Cys	Val	Arg	Gln	Ala	Asn	Ile
				50					55					60

Arg	Met	Gln	Cys	Lys	Ile	Tyr	Asp	Ser	Leu	Leu	Ala	Leu	Ser	Pro
				65					70					75

Asp	Leu	Gln	Ala	Ala	Arg	Gly	Leu	Met	Cys	Ala	Ala	Ser	Val	Met
				80					85					90

Ser	Phe	Leu	Ala	Phe	Met	Met	Ala	Ile	Leu	Gly	Met	Lys	Cys	Thr
				95					100					105

Arg	Cys	Thr	Gly	Asp	Asn	Glu	Lys	Val	Lys	Ala	His	Ile	Leu	Leu
				110					115					120

Thr	Ala	Gly	Ile	Ile	Phe	Ile	Ile	Thr	Gly	Met	Val	Val	Leu	Ile
				125					130					135

Pro	Val	Ser	Trp	Val	Ala	Asn	Ala	Ile	Ile	Arg	Asp	Phe	Tyr	Asn
				140					145					150

Ser	Ile	Val	Asn	Val	Ala	Gln	Lys	Arg	Glu	Leu	Gly	Glu	Ala	Leu
				155					160					165

Tyr	Leu	Gly	Trp	Thr	Thr	Ala	Leu	Val	Leu	Ile	Val	Gly	Gly	Ala
				170					175					180

Leu	Phe	Cys	Cys	Val	Phe	Cys	Cys	Asn	Glu	Lys	Ser	Ser	Ser	Tyr
				185					190					195

Arg	Tyr	Ser	Ile	Pro	Ser	His	Arg	Thr	Thr	Gln	Lys	Ser	Tyr	His
				200					205					210

Thr	Gly	Lys	Lys	Ser	Pro	Ser	Val	Tyr	Ser	Arg	Ser	Gln	Tyr	Val
				215					220					225

<210> 121

<211> 1257  
<212> DNA  
<213> Homo Sapien

<400> 121

```
ggagagagggc gcgcgggtga aaggcgcatt gatgcagcct gcggcggcct 50
cggagcgcgg cggagccaga cgctgaccac gttcctctcc tcggtctcct 100
ccgcctccag ctccgcgctg cccggcagcc gggagccatg cgaccccagg 150
gccccgcgcg cccccgcag cggctccgcg gcctcctgct gctcctgctg 200
ctgcagctgc ccgcgccgtc gagcgcctct gagatcccca aggggaagca 250
aaaggcgcag ctccggcaga gggagggtgtt ggacctgtat aatggaatgt 300
gcttacaagg gccagcagga gtgcctggtc gagacgggag ccctggggcc 350
aatgttattc cgggtacacc tgggatccca ggtcgggatg gattcaaagg 400
agaaaagggg gaatgtctga gggaaagctt tgaggagtcc tggacacca 450
actacaagca gtgttcattg agttcattga attatggcat agatcttggg 500
aaaattgcgg agtgtacatt tacaagatg cgttcaaata gtgctctaag 550
agttttgttc agtggctcac ttcggctaaa atgcagaaat gcatgctgtc 600
agcgttggtt tttcacattc aatggagctg aatgttcagg acctcttccc 650
attgaagcta taatttatth ggaccaagga agccctgaaa tgaattcaac 700
aattaatatt catcgcactt cttctgtgga aggactttgt gaaggaattg 750
gtgctggatt agtggatgtt gctatctggg ttggcacttg ttcagattac 800
ccaaaaggag atgcttctac tggatggaat tcagtttctc gcatcattat 850
tgaagaacta ccaaaataaa tgctttaatt ttcatttgct acctcttttt 900
ttattatgcc ttggaatggt tcaactaaat gacattttta ataagtttat 950
gtatacatct gaatgaaaag caaagctaaa tatgtttaca gaccaaagt 1000
tgatttcaca ctgtttttta atctagcatt attcattttg cttcaatcaa 1050
aagtggtttc aatatttttt ttagttgggt agaatacttt cttcatagtc 1100
acattctctc aacctataat ttggaatatt gttgtgggtc tttgtttttt 1150
ctcttagtat agcattttta aaaaaatata aaagctacca atctttgtac 1200
aatttgtaaa tgttaagaat tttttttata tctgttaaatt aaaaattatt 1250
tccaaca 1257
```

<210> 122

<211> 243  
 <212> PRT  
 <213> Homo Sapien

<400> 122

Met	Arg	Pro	Gln	Gly	Pro	Ala	Ala	Ser	Pro	Gln	Arg	Leu	Arg	Gly	1	5	10	15
Leu	Leu	Leu	Leu	Leu	Leu	Leu	Gln	Leu	Pro	Ala	Pro	Ser	Ser	Ala	20	25	30	
Ser	Glu	Ile	Pro	Lys	Gly	Lys	Gln	Lys	Ala	Gln	Leu	Arg	Gln	Arg	35	40	45	
Glu	Val	Val	Asp	Leu	Tyr	Asn	Gly	Met	Cys	Leu	Gln	Gly	Pro	Ala	50	55	60	
Gly	Val	Pro	Gly	Arg	Asp	Gly	Ser	Pro	Gly	Ala	Asn	Val	Ile	Pro	65	70	75	
Gly	Thr	Pro	Gly	Ile	Pro	Gly	Arg	Asp	Gly	Phe	Lys	Gly	Glu	Lys	80	85	90	
Gly	Glu	Cys	Leu	Arg	Glu	Ser	Phe	Glu	Glu	Ser	Trp	Thr	Pro	Asn	95	100	105	
Tyr	Lys	Gln	Cys	Ser	Trp	Ser	Ser	Leu	Asn	Tyr	Gly	Ile	Asp	Leu	110	115	120	
Gly	Lys	Ile	Ala	Glu	Cys	Thr	Phe	Thr	Lys	Met	Arg	Ser	Asn	Ser	125	130	135	
Ala	Leu	Arg	Val	Leu	Phe	Ser	Gly	Ser	Leu	Arg	Leu	Lys	Cys	Arg	140	145	150	
Asn	Ala	Cys	Cys	Gln	Arg	Trp	Tyr	Phe	Thr	Phe	Asn	Gly	Ala	Glu	155	160	165	
Cys	Ser	Gly	Pro	Leu	Pro	Ile	Glu	Ala	Ile	Ile	Tyr	Leu	Asp	Gln	170	175	180	
Gly	Ser	Pro	Glu	Met	Asn	Ser	Thr	Ile	Asn	Ile	His	Arg	Thr	Ser	185	190	195	
Ser	Val	Glu	Gly	Leu	Cys	Glu	Gly	Ile	Gly	Ala	Gly	Leu	Val	Asp	200	205	210	
Val	Ala	Ile	Trp	Val	Gly	Thr	Cys	Ser	Asp	Tyr	Pro	Lys	Gly	Asp	215	220	225	
Ala	Ser	Thr	Gly	Trp	Asn	Ser	Val	Ser	Arg	Ile	Ile	Ile	Glu	Glu	230	235	240	
Leu	Pro	Lys																

<210> 123

<211> 2379  
<212> DNA  
<213> Homo Sapien

<400> 123

```
gctgagcgtg tgcgcggtac ggggctctcc tgccttctgg gctccaacgc 50
agctctgtgg ctgaactggg tgctcatcac gggaactgct gggctatgga 100
atacagatgt ggcagctcag gtagccccaa attgcctgga agaatacatc 150
atgtttttcg ataagaagaa attgtaggat ccagtttttt ttttaaccgc 200
cccctcccca cccccaaaa aaactgtaaa gatgcaaaaa cgtaatatcc 250
atgaagatcc tattacctag gaagattttg atgttttgct gcgaatgcgg 300
tgttgggatt tttttgttct tggagtgttc tgcgtggctg gcaaagaata 350
atgttcctaaa atcgggtccat ctcccaaggg gtccaatttt tcttctctggg 400
tgtcagcgag ccctgactca ctacagtga gctgacaggg gctgtcatgc 450
aactggcccc taagccaaag caaaagacct aaggacgacc tttgaacaat 500
acaaaggatg ggtttcaatg taattaggct actgagcgga tcagctgtag 550
cactggttat agccccact gtcttactga caatgctttc ttctgccgaa 600
cgaggatgcc ctaagggtg taggtgtgaa ggcaaatgg tatattgtga 650
atctcagaaa ttacaggaga taccctcaag tataatctgct ggttgcttag 700
gtttgtccct tcgtataac agccttcaaa aacttaagta taatcaattt 750
aaagggtca accagctcac ctggctatac cttgaccata accatatcag 800
caatattgac gaaaatgctt ttaatggaat acgcagactc aaagagctga 850
ttcttagttc caatagaatc tcctattttc ttaacaatac cttcagacct 900
gtgacaaatt tacggaactt ggatctgtcc tataatcagc tgcattctct 950
gggatctgaa cagtttcggg gcttgcgga gctgctgagt ttacatttac 1000
ggtctaactc cctgagaacc atccctgtgc gaatattcca agactgccgc 1050
aacctggaac ttttgacact gggatataac cggatccgaa gtttagccag 1100
gaatgtcttt gctggcatga tcagactcaa agaacttcac ctggagcaca 1150
atcaattttc caagctcaac ctggcccttt ttccaagggtt ggtcagcctt 1200
cagaaccttt acttgacgtg gaataaaatc agtgtcatag gacagaccat 1250
gtcctggacc tggagctcct tacaaaggct tgatttatca ggcaatgaga 1300
tcgaagcttt cagtggaccc agtgttttcc agtgtgtccc gaatctgcag 1350
```

cgctcaacc tggattccaa caagctcaca tttattgggc aagagatttt 1400  
 ggattcttgg atatccctca atgacatcag tcttgctggg aatatatggg 1450  
 aatgcagcag aaatatttgc tcccttgtaa actggctgaa aagttttaaa 1500  
 ggtctaaggg agaatacaat tatctgtgcc agtcccaaag agctgcaagg 1550  
 agtaaagtgt atcgatgcag tgaagaacta cagcatctgt ggcaaaagta 1600  
 ctacagagag gtttgatctg gccagggctc tcccaaagcc gacgtttaag 1650  
 cccaagctcc ccaggccgaa gcatgagagc aaacccctt tgcccccgac 1700  
 ggtgggagcc acagagcccg gccagagac cgatgctgac gccgagcaca 1750  
 tctctttcca taaaatcatc gcgggcagcg tggcgctttt cctgtccgtg 1800  
 ctcgctcatcc tgctggttat ctacgtgtca tggaagcggg accctgcgag 1850  
 catgaagcag ctgcagcagc gctccctcat gcgaaggcac aggaaaaaga 1900  
 aaagacagtc cctaaagcaa atgactccca gcaccagga attttatgta 1950  
 gattataaac ccaccaacac ggagaccagc gagatgctgc tgaatgggac 2000  
 gggaccctgc acctataaca aatcgggctc caggagagtgt gaggtatgaa 2050  
 ccattgtgat aaaaagagct cttaaaagct gggaaataag tggtgcttta 2100  
 ttgaactctg gtgactatca agggaacgcg atgcccccc tccccttccc 2150  
 tctccctctc actttgggtg caagatcctt ccttgctcgt tttagtgc 2200  
 tcataatact ggtcattttc ctctcataca taatcaaccc attgaaattt 2250  
 aaataccaca atcaatgtga agcttgaact ccggtttaat ataataccta 2300  
 ttgtataaga ccctttactg attccattaa tgtcgcattt gttttaagat 2350  
 aaaacttctt tcataggtaa aaaaaaaaa 2379

<210> 124

<211> 513

<212> PRT

<213> Homo Sapien

<400> 124

Met	Gly	Phe	Asn	Val	Ile	Arg	Leu	Leu	Ser	Gly	Ser	Ala	Val	Ala
1				5					10					15
Leu	Val	Ile	Ala	Pro	Thr	Val	Leu	Leu	Thr	Met	Leu	Ser	Ser	Ala
				20					25					30
Glu	Arg	Gly	Cys	Pro	Lys	Gly	Cys	Arg	Cys	Glu	Gly	Lys	Met	Val
				35					40					45

Tyr	Cys	Glu	Ser	Gln	Lys	Leu	Gln	Glu	Ile	Pro	Ser	Ser	Ile	Ser	
				50					55					60	
Ala	Gly	Cys	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	Ser	Leu	Gln	Lys	
				65					70					75	
Leu	Lys	Tyr	Asn	Gln	Phe	Lys	Gly	Leu	Asn	Gln	Leu	Thr	Trp	Leu	
				80					85					90	
Tyr	Leu	Asp	His	Asn	His	Ile	Ser	Asn	Ile	Asp	Glu	Asn	Ala	Phe	
				95					100					105	
Asn	Gly	Ile	Arg	Arg	Leu	Lys	Glu	Leu	Ile	Leu	Ser	Ser	Asn	Arg	
				110					115					120	
Ile	Ser	Tyr	Phe	Leu	Asn	Asn	Thr	Phe	Arg	Pro	Val	Thr	Asn	Leu	
				125					130					135	
Arg	Asn	Leu	Asp	Leu	Ser	Tyr	Asn	Gln	Leu	His	Ser	Leu	Gly	Ser	
				140					145					150	
Glu	Gln	Phe	Arg	Gly	Leu	Arg	Lys	Leu	Leu	Ser	Leu	His	Leu	Arg	
				155					160					165	
Ser	Asn	Ser	Leu	Arg	Thr	Ile	Pro	Val	Arg	Ile	Phe	Gln	Asp	Cys	
				170					175					180	
Arg	Asn	Leu	Glu	Leu	Leu	Asp	Leu	Gly	Tyr	Asn	Arg	Ile	Arg	Ser	
				185					190					195	
Leu	Ala	Arg	Asn	Val	Phe	Ala	Gly	Met	Ile	Arg	Leu	Lys	Glu	Leu	
				200					205					210	
His	Leu	Glu	His	Asn	Gln	Phe	Ser	Lys	Leu	Asn	Leu	Ala	Leu	Phe	
				215					220					225	
Pro	Arg	Leu	Val	Ser	Leu	Gln	Asn	Leu	Tyr	Leu	Gln	Trp	Asn	Lys	
				230					235					240	
Ile	Ser	Val	Ile	Gly	Gln	Thr	Met	Ser	Trp	Thr	Trp	Ser	Ser	Leu	
				245					250					255	
Gln	Arg	Leu	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Ala	Phe	Ser	Gly	
				260					265					270	
Pro	Ser	Val	Phe	Gln	Cys	Val	Pro	Asn	Leu	Gln	Arg	Leu	Asn	Leu	
				275					280					285	
Asp	Ser	Asn	Lys	Leu	Thr	Phe	Ile	Gly	Gln	Glu	Ile	Leu	Asp	Ser	
				290					295					300	
Trp	Ile	Ser	Leu	Asn	Asp	Ile	Ser	Leu	Ala	Gly	Asn	Ile	Trp	Glu	
				305					310					315	
Cys	Ser	Arg	Asn	Ile	Cys	Ser	Leu	Val	Asn	Trp	Leu	Lys	Ser	Phe	
				320					325					330	

Lys	Gly	Leu	Arg	Glu	Asn	Thr	Ile	Ile	Cys	Ala	Ser	Pro	Lys	Glu	
				335					340					345	
Leu	Gln	Gly	Val	Asn	Val	Ile	Asp	Ala	Val	Lys	Asn	Tyr	Ser	Ile	
				350					355					360	
Cys	Gly	Lys	Ser	Thr	Thr	Glu	Arg	Phe	Asp	Leu	Ala	Arg	Ala	Leu	
				365					370					375	
Pro	Lys	Pro	Thr	Phe	Lys	Pro	Lys	Leu	Pro	Arg	Pro	Lys	His	Glu	
				380					385					390	
Ser	Lys	Pro	Pro	Leu	Pro	Pro	Thr	Val	Gly	Ala	Thr	Glu	Pro	Gly	
				395					400					405	
Pro	Glu	Thr	Asp	Ala	Asp	Ala	Glu	His	Ile	Ser	Phe	His	Lys	Ile	
				410					415					420	
Ile	Ala	Gly	Ser	Val	Ala	Leu	Phe	Leu	Ser	Val	Leu	Val	Ile	Leu	
				425					430					435	
Leu	Val	Ile	Tyr	Val	Ser	Trp	Lys	Arg	Tyr	Pro	Ala	Ser	Met	Lys	
				440					445					450	
Gln	Leu	Gln	Gln	Arg	Ser	Leu	Met	Arg	Arg	His	Arg	Lys	Lys	Lys	
				455					460					465	
Arg	Gln	Ser	Leu	Lys	Gln	Met	Thr	Pro	Ser	Thr	Gln	Glu	Phe	Tyr	
				470					475					480	
Val	Asp	Tyr	Lys	Pro	Thr	Asn	Thr	Glu	Thr	Ser	Glu	Met	Leu	Leu	
				485					490					495	
Asn	Gly	Thr	Gly	Pro	Cys	Thr	Tyr	Asn	Lys	Ser	Gly	Ser	Arg	Glu	
				500					505					510	

Cys Glu Val

<210> 125  
 <211> 998  
 <212> DNA  
 <213> Homo Sapien

<400> 125  
 ccgttatcgt cttgcgctac tgctgaatgt ccgtcccga ggaggaggag 50  
 aggcttttgc cgctgacca gagatggccc cgagcgagca aattcctact 100  
 gtccggctgc gcggctaccg tggccgagct agcaaccttt cccctggatc 150  
 tcacaaaaac tcgactcaa atgcaaggag aagcagctct tgctcggttg 200  
 ggagacggtg caagagaatc tgccccctat aggggaatgg tgcgcacagc 250  
 cctagggatc attgaagagg aaggctttct aaagctttgg caaggagtga 300



caccgcgcat ttacagacac gtagtgtatt ctggaggctg aatgggcaca 350  
tatgaacatc tccgagaggt tgtgtttggc aaaagtgaag atgagcatta 400  
tcccctttgg aaatcagtca ttggagggat gatggctggt gttattggcc 450  
agtttttagc caatccaact gacctagtga aggttcagat gcaaattggaa 500  
ggaaaaagga aactggaagg aaaaccattg cgatttcgtg gtgtacatca 550  
tgcatttgca aaaatcttag ctgaaggagg aatacgaggg ctttgggcag 600  
gctgggtacc caatatacaa agagcagcac tggatgaatat gggagattta 650  
accacttatg atacagtga acactacttg gtattgaata caccacttga 700  
ggacaatatc atgactcacg gtttatcaag tttatgttct ggactggtag 750  
cttctattct gggaacacca gccgatgtca tcaaagcag aataatgaat 800  
caaccacgag ataaacaagg aaggggactt ttgtataaat catcgactga 850  
ctgcttgatt caggctgttc aaggtgaagg attcatgagt ctatataaag 900  
gctttttacc atcttggtg agaatgaccc cttggtcaat ggtgttctgg 950  
cttacttatg aaaaaatcag agagatgagt ggagtcagtc catttttaa 998

<210> 126

<211> 323

<212> PRT

<213> Homo Sapien

<400> 126

Met	Ser	Val	Pro	Glu	Glu	Glu	Glu	Arg	Leu	Leu	Pro	Leu	Thr	Gln
1				5					10					15
Arg	Trp	Pro	Arg	Ala	Ser	Lys	Phe	Leu	Leu	Ser	Gly	Cys	Ala	Ala
				20					25					30
Thr	Val	Ala	Glu	Leu	Ala	Thr	Phe	Pro	Leu	Asp	Leu	Thr	Lys	Thr
				35					40					45
Arg	Leu	Gln	Met	Gln	Gly	Glu	Ala	Ala	Leu	Ala	Arg	Leu	Gly	Asp
				50					55					60
Gly	Ala	Arg	Glu	Ser	Ala	Pro	Tyr	Arg	Gly	Met	Val	Arg	Thr	Ala
				65					70					75
Leu	Gly	Ile	Ile	Glu	Glu	Glu	Gly	Phe	Leu	Lys	Leu	Trp	Gln	Gly
				80					85					90
Val	Thr	Pro	Ala	Ile	Tyr	Arg	His	Val	Val	Tyr	Ser	Gly	Gly	Arg
				95					100					105
Met	Val	Thr	Tyr	Glu	His	Leu	Arg	Glu	Val	Val	Phe	Gly	Lys	Ser
				110					115					120

Glu	Asp	Glu	His	Tyr	Pro	Leu	Trp	Lys	Ser	Val	Ile	Gly	Gly	Met	
				125					130					135	
Met	Ala	Gly	Val	Ile	Gly	Gln	Phe	Leu	Ala	Asn	Pro	Thr	Asp	Leu	
				140					145					150	
Val	Lys	Val	Gln	Met	Gln	Met	Glu	Gly	Lys	Arg	Lys	Leu	Glu	Gly	
				155					160					165	
Lys	Pro	Leu	Arg	Phe	Arg	Gly	Val	His	His	Ala	Phe	Ala	Lys	Ile	
				170					175					180	
Leu	Ala	Glu	Gly	Gly	Ile	Arg	Gly	Leu	Trp	Ala	Gly	Trp	Val	Pro	
				185					190					195	
Asn	Ile	Gln	Arg	Ala	Ala	Leu	Val	Asn	Met	Gly	Asp	Leu	Thr	Thr	
				200					205					210	
Tyr	Asp	Thr	Val	Lys	His	Tyr	Leu	Val	Leu	Asn	Thr	Pro	Leu	Glu	
				215					220					225	
Asp	Asn	Ile	Met	Thr	His	Gly	Leu	Ser	Ser	Leu	Cys	Ser	Gly	Leu	
				230					235					240	
Val	Ala	Ser	Ile	Leu	Gly	Thr	Pro	Ala	Asp	Val	Ile	Lys	Ser	Arg	
				245					250					255	
Ile	Met	Asn	Gln	Pro	Arg	Asp	Lys	Gln	Gly	Arg	Gly	Leu	Leu	Tyr	
				260					265					270	
Lys	Ser	Ser	Thr	Asp	Cys	Leu	Ile	Gln	Ala	Val	Gln	Gly	Glu	Gly	
				275					280					285	
Phe	Met	Ser	Leu	Tyr	Lys	Gly	Phe	Leu	Pro	Ser	Trp	Leu	Arg	Met	
				290					295					300	
Thr	Pro	Trp	Ser	Met	Val	Phe	Trp	Leu	Thr	Tyr	Glu	Lys	Ile	Arg	
				305					310					315	
Glu	Met	Ser	Gly	Val	Ser	Pro	Phe								
				320											

<210> 127  
 <211> 1505  
 <212> DNA  
 <213> Homo Sapien

<400> 127  
 cgcgatcgg acccaagcag gtcggcggcg gcggcaggag agcggccggg 50  
 cgtcagctcc tcgacccccg tgtcgggcta gtccagcgag gcggacgggc 100  
 ggcgtgggcc catggccagg cccggcatgg agcgggtggcg cgaccggctg 150  
 gcgctggtga cgggggcctc ggggggcata ggcgcggccg tggcccgggc 200  
 cctggtccag cagggactga aggtggtggg ctgcgcccgc actgtgggca 250

acatcgagga gctggctgct gaatgtaaga gtgcaggcta ccccgaggact 300  
 ttgatccctt acagatgtga cctatcaaatt gaagaggaca tcctctccat 350  
 gttctcagct atccgttctc agcacagcgg tgtagacatc tgcattcaaca 400  
 atgctggctt ggcccgccct gacaccctgc tctcaggcag caccagtggg 450  
 tggaaggaca tgttcaatgt gaacgtgctg gccctcagca tctgcacacg 500  
 ggaagcctac cagtccatga aggagcggaa tgtggacgat gggcacatca 550  
 ttaacatcaa tagcatgtct ggccaccgag tgttaccctt gtctgtgacc 600  
 cacttctata gtgccaccaa gtatgccgtc actgcgctga cagagggact 650  
 gaggcaagag cttcgggagg ccagaccca catccgagcc acgtgcatct 700  
 ctccaggtgt ggtggagaca caattgcctt tcaaactcca cgacaaggac 750  
 cctgagaagg cagctgccac ctatgagcaa atgaagtgtc tcaaaccgca 800  
 ggatgtggcc gaggctgtta tctacgtcct cagcaccccc gcacacatcc 850  
 agattggaga catccagatg aggcccacgg agcaggtgac ctagtgactg 900  
 tgggagctcc tccttccttc cccacccttc atggcttgcc tcctgcctct 950  
 ggattttagg tgttgatttc tggatcacgg gataccactt cctgtccaca 1000  
 ccccgaccag gggctagaaa atttgtttga gatttttata tcattctgtc 1050  
 aaattgcttc agttgtaaat gtgaaaaatg ggctggggaa aggaggtggg 1100  
 gtccctaatt gttttacttg ttaacttggt cttgtgcccc tgggcacttg 1150  
 gcctttgtct gctctcagt tcttcctttt gacatgggaa aggagttgtg 1200  
 gccaaaatcc ccatcttctt gcacctcaac gtctgtggct cagggctggg 1250  
 gtggcagagg gaggccttca ccttatatct gtgttggtat ccagggtcc 1300  
 agacttcctc ctctgcctgc cccactgcac cctctcccc ttatctatct 1350  
 ccttctcggc tccccagccc agtcttggt tcttgtcccc tcctggggtc 1400  
 atccctccac tctgactctg actatggcag cagaacacca gggcctggcc 1450  
 cagtggattt catgggtgatc attaaaaaag aaaaatcgca accaaaaaaa 1500  
 aaaaa 1505

<210> 128  
 <211> 260  
 <212> PRT  
 <213> Homo Sapien

<400> 128

Met	Ala	Arg	Pro	Gly	Met	Glu	Arg	Trp	Arg	Asp	Arg	Leu	Ala	Leu	
1				5					10					15	
Val	Thr	Gly	Ala	Ser	Gly	Gly	Ile	Gly	Ala	Ala	Val	Ala	Arg	Ala	
				20					25					30	
Leu	Val	Gln	Gln	Gly	Leu	Lys	Val	Val	Gly	Cys	Ala	Arg	Thr	Val	
				35					40					45	
Gly	Asn	Ile	Glu	Glu	Leu	Ala	Ala	Glu	Cys	Lys	Ser	Ala	Gly	Tyr	
				50					55					60	
Pro	Gly	Thr	Leu	Ile	Pro	Tyr	Arg	Cys	Asp	Leu	Ser	Asn	Glu	Glu	
				65					70					75	
Asp	Ile	Leu	Ser	Met	Phe	Ser	Ala	Ile	Arg	Ser	Gln	His	Ser	Gly	
				80					85					90	
Val	Asp	Ile	Cys	Ile	Asn	Asn	Ala	Gly	Leu	Ala	Arg	Pro	Asp	Thr	
				95					100					105	
Leu	Leu	Ser	Gly	Ser	Thr	Ser	Gly	Trp	Lys	Asp	Met	Phe	Asn	Val	
				110					115					120	
Asn	Val	Leu	Ala	Leu	Ser	Ile	Cys	Thr	Arg	Glu	Ala	Tyr	Gln	Ser	
				125					130					135	
Met	Lys	Glu	Arg	Asn	Val	Asp	Asp	Gly	His	Ile	Ile	Asn	Ile	Asn	
				140					145					150	
Ser	Met	Ser	Gly	His	Arg	Val	Leu	Pro	Leu	Ser	Val	Thr	His	Phe	
				155					160					165	
Tyr	Ser	Ala	Thr	Lys	Tyr	Ala	Val	Thr	Ala	Leu	Thr	Glu	Gly	Leu	
				170					175					180	
Arg	Gln	Glu	Leu	Arg	Glu	Ala	Gln	Thr	His	Ile	Arg	Ala	Thr	Cys	
				185					190					195	
Ile	Ser	Pro	Gly	Val	Val	Glu	Thr	Gln	Phe	Ala	Phe	Lys	Leu	His	
				200					205					210	
Asp	Lys	Asp	Pro	Glu	Lys	Ala	Ala	Ala	Thr	Tyr	Glu	Gln	Met	Lys	
				215					220					225	
Cys	Leu	Lys	Pro	Glu	Asp	Val	Ala	Glu	Ala	Val	Ile	Tyr	Val	Leu	
				230					235					240	
Ser	Thr	Pro	Ala	His	Ile	Gln	Ile	Gly	Asp	Ile	Gln	Met	Arg	Pro	
				245					250					255	
Thr	Glu	Gln	Val	Thr											
				260											

<210> 129

<211> 1177

<212> DNA

<213> Homo Sapien

<400> 129

```
aacttctaca tgggcctcct gctgctggtg ctcttctca gcctcctgcc 50
ggtggcctac accatcatgt ccctcccacc ctcccttgac tgcgggccgt 100
tcaggtgcag agtctcagtt gcccgggagc acctcccctc ccgaggcagt 150
ctgctcagag ggcctcggcc cagaattcca gttctggttt catgccagcc 200
tgtaaaaggc catggaactt tgggtgaatc accgatgcc ttttaagagg 250
ttttctgcc ggatggaaat gttaggctgt tctgtgtctg cgctgttcat 300
ttcagtagcc accagccacc tgtggccgtt gagtgcctga aatgaggaac 350
tgagaaaatt aatttctcat gtatttttct catttattta ttaattttta 400
actgatagtt gtacatattt gggggtacat gtgatatttg gatacatgta 450
tacaatatat aatgatcaaa tcagggtaac tgggatatcc atcacatcaa 500
acatttattt tttattcttt ttagacagag tctcactctg tcaccaggc 550
tgagagtgcag tgggtgccatc tcagcttact gcaacctctg cctgccaggt 600
tcaagcgatt ctcatgcctc cacctcccaa gtagctggga ctacaggcat 650
gcaccacaat gcccaactaa tttttgtatt tttagtagag acgggggttt 700
gccatgttgc ccaggctggc cttgaactcc tggcctcaaa caatccactt 750
gcctcggcct cccaaagtgt tatgattaca ggcgtgagcc accgtgcctg 800
gcctaaacat ttatcttttc tttgtgttgg gaactttgaa attatacaat 850
gaattattgt taactgtcat ctccctgctg tgctatggaa cactgggact 900
tcttccctct atctaactgt atatttgtac cagttaacca accgtacttc 950
atccccactc ctctctatcc ttcccaacct ctgatcacct cattctactc 1000
tctacctcca tgagatccac ttttttagct ccacatgtg agtaagaaaa 1050
tgcaatatat gtctttctgt gcctggctta tttcacttaa cataatgact 1100
tcctgttcca tccatgttgc tgcaaatgac aggatttcgt tcttaatttc 1150
aattaaaata accacacatg gcaaaaa 1177
```

<210> 130

<211> 111

<212> PRT

<213> Homo Sapien

<400> 130

Met Gly Leu Leu Leu Leu Val Leu Phe Leu Ser Leu Leu Pro Val

1	5	10	15
Ala Tyr Thr Ile Met Ser Leu Pro Pro Ser Phe Asp Cys Gly Pro	20	25	30
Phe Arg Cys Arg Val Ser Val Ala Arg Glu His Leu Pro Ser Arg	35	40	45
Gly Ser Leu Leu Arg Gly Pro Arg Pro Arg Ile Pro Val Leu Val	50	55	60
Ser Cys Gln Pro Val Lys Gly His Gly Thr Leu Gly Glu Ser Pro	65	70	75
Met Pro Phe Lys Arg Val Phe Cys Gln Asp Gly Asn Val Arg Ser	80	85	90
Phe Cys Val Cys Ala Val His Phe Ser Ser His Gln Pro Pro Val	95	100	105
Ala Val Glu Cys Leu Lys	110		

<210> 131  
 <211> 2061  
 <212> DNA  
 <213> Homo Sapien

<400> 131  
 ttctgaagta acggaagcta ccttgtataa agacctcaac actgctgacc 50  
 atgatcagcg cagcctggag catcttcctc atcgggacta aaattgggct 100  
 gttccttcaa gtagcacctc tatcagttat ggctaaatcc tgtccatctg 150  
 tgtgtcgctg cgatgcgggt ttcatttact gtaatgatcg ctttctgaca 200  
 tccattccaa caggaatacc agaggatgct acaactctct accttcagaa 250  
 caaccaaata aataatgctg ggattccttc agatttgaaa aacttgctga 300  
 aagtagaaaag aatataccta taccacaaca gtttagatga atttcctacc 350  
 aacctcccaa agtatgtaaa agagttacat ttgcaagaaa ataacataag 400  
 gactatcact tatgattcac tttcaaaaat tccctatctg gaagaattac 450  
 atttagatga caactctgtc tctgcagtta gcatagaaga gggagcattc 500  
 cgagacagca actatctccg actgcttttc ctgtcccgta atcaccttag 550  
 cacaattccc tggggtttgc ccaggactat agaagaacta cgcttggatg 600  
 ataatcgcat atccactatt tcatcaccat ctcttcaagg tctcactagt 650  
 ctaaaacgcc tgggttctaga tggaaacctg ttgaacaatc atgggttagg 700

tgacaaagtt ttcttcaacc tagttaattt gacagagctg tccctggtgc 750  
 ggaattccct gactgctgca ccagtaaacc ttccaggcac aaacctgagg 800  
 aagctttatc ttcaagataa ccacatcaat cgggtgcccc caaatgcttt 850  
 ttcttatcta aggcagctct atcgactgga tatgtccaat aataaccta 900  
 gtaatttacc tcagggtatc tttgatgatt tggacaatat aacacaactg 950  
 attcttcgca acaatccctg gtattgctgg tgcaagatga aatgggtacg 1000  
 tgactgggta caatcactac ctgtgaaggt caacgtgcgt gggctcatgt 1050  
 gccaaagcccc agaaaagggt cgtgggatgg ctattaagga tctcaatgca 1100  
 gaactgtttg attgtaagga cagtgggatt gtaagcacca ttcagataac 1150  
 cactgcaata cccaacacag tgtatcctgc ccaaggacag tggccagctc 1200  
 cagtgaccaa acagccagat attaagaacc ccaagctcac taaggatcaa 1250  
 caaaccacag ggagtcctc aagaaaaaca attacaatta ctgtgaagtc 1300  
 tgtcacctct gataccattc atatctcttg gaaacttgct ctacctatga 1350  
 ctgctttgag actcagctgg cttaaactgg gccatagccc ggcatttgga 1400  
 tctataacag aaacaattgt aacaggggaa cgcagtgagt acttggtcac 1450  
 agccctggag cctgattcac cctataaagt atgcatgggt cccatggaaa 1500  
 ccagcaacct ctacctattt gatgaaactc ctgtttgtat tgagactgaa 1550  
 actgcacccc ttcgaatgta caaccctaca accaccctca atcgagagca 1600  
 agagaaagaa ccttacaaaa accccaattt acctttggct gccatcattg 1650  
 gtggggctgt ggccctgggt accattgccc ttcttgcttt agtgtgttg 1700  
 tatgttcata ggaatggatc gctcttctca aggaactgtg catatagcaa 1750  
 agggaggaga agaaaggatg actatgcaga agctggcact aagaaggaca 1800  
 actctatcct ggaaatcagg gaaacttctt ttcagatgtt accaataagc 1850  
 aatgaacca tctcgaagga ggagtttgta atacacacca tatttcctcc 1900  
 taatggaatg aatctgtaca aaaacaatca cagtgaaagc agtagtaacc 1950  
 gaagctacag agacagtgggt attccagact cagatcactc acactcatga 2000  
 tgctgaagga ctacagcag acttgtgttt tgggtttttt aaacctaagg 2050  
 gaggtgatgg t 2061

<211> 649  
<212> PRT  
<213> Homo Sapien

<400> 132

Met	Ile	Ser	Ala	Ala	Trp	Ser	Ile	Phe	Leu	Ile	Gly	Thr	Lys	Ile	
1				5					10					15	
Gly	Leu	Phe	Leu	Gln	Val	Ala	Pro	Leu	Ser	Val	Met	Ala	Lys	Ser	
				20					25					30	
Cys	Pro	Ser	Val	Cys	Arg	Cys	Asp	Ala	Gly	Phe	Ile	Tyr	Cys	Asn	
				35					40					45	
Asp	Arg	Phe	Leu	Thr	Ser	Ile	Pro	Thr	Gly	Ile	Pro	Glu	Asp	Ala	
				50					55					60	
Thr	Thr	Leu	Tyr	Leu	Gln	Asn	Asn	Gln	Ile	Asn	Asn	Ala	Gly	Ile	
				65					70					75	
Pro	Ser	Asp	Leu	Lys	Asn	Leu	Leu	Lys	Val	Glu	Arg	Ile	Tyr	Leu	
				80					85					90	
Tyr	His	Asn	Ser	Leu	Asp	Glu	Phe	Pro	Thr	Asn	Leu	Pro	Lys	Tyr	
				95					100					105	
Val	Lys	Glu	Leu	His	Leu	Gln	Glu	Asn	Asn	Ile	Arg	Thr	Ile	Thr	
				110					115					120	
Tyr	Asp	Ser	Leu	Ser	Lys	Ile	Pro	Tyr	Leu	Glu	Glu	Leu	His	Leu	
				125					130					135	
Asp	Asp	Asn	Ser	Val	Ser	Ala	Val	Ser	Ile	Glu	Glu	Gly	Ala	Phe	
				140					145					150	
Arg	Asp	Ser	Asn	Tyr	Leu	Arg	Leu	Leu	Phe	Leu	Ser	Arg	Asn	His	
				155					160					165	
Leu	Ser	Thr	Ile	Pro	Trp	Gly	Leu	Pro	Arg	Thr	Ile	Glu	Glu	Leu	
				170					175					180	
Arg	Leu	Asp	Asp	Asn	Arg	Ile	Ser	Thr	Ile	Ser	Ser	Pro	Ser	Leu	
				185					190					195	
Gln	Gly	Leu	Thr	Ser	Leu	Lys	Arg	Leu	Val	Leu	Asp	Gly	Asn	Leu	
				200					205					210	
Leu	Asn	Asn	His	Gly	Leu	Gly	Asp	Lys	Val	Phe	Phe	Asn	Leu	Val	
				215					220					225	
Asn	Leu	Thr	Glu	Leu	Ser	Leu	Val	Arg	Asn	Ser	Leu	Thr	Ala	Ala	
				230					235					240	
Pro	Val	Asn	Leu	Pro	Gly	Thr	Asn	Leu	Arg	Lys	Leu	Tyr	Leu	Gln	
				245					250					255	
Asp	Asn	His	Ile	Asn	Arg	Val	Pro	Pro	Asn	Ala	Phe	Ser	Tyr	Leu	



260					265					270				
Arg	Gln	Leu	Tyr	Arg	Leu	Asp	Met	Ser	Asn	Asn	Asn	Leu	Ser	Asn
				275					280					285
Leu	Pro	Gln	Gly	Ile	Phe	Asp	Asp	Leu	Asp	Asn	Ile	Thr	Gln	Leu
				290					295					300
Ile	Leu	Arg	Asn	Asn	Pro	Trp	Tyr	Cys	Gly	Cys	Lys	Met	Lys	Trp
				305					310					315
Val	Arg	Asp	Trp	Leu	Gln	Ser	Leu	Pro	Val	Lys	Val	Asn	Val	Arg
				320					325					330
Gly	Leu	Met	Cys	Gln	Ala	Pro	Glu	Lys	Val	Arg	Gly	Met	Ala	Ile
				335					340					345
Lys	Asp	Leu	Asn	Ala	Glu	Leu	Phe	Asp	Cys	Lys	Asp	Ser	Gly	Ile
				350					355					360
Val	Ser	Thr	Ile	Gln	Ile	Thr	Thr	Ala	Ile	Pro	Asn	Thr	Val	Tyr
				365					370					375
Pro	Ala	Gln	Gly	Gln	Trp	Pro	Ala	Pro	Val	Thr	Lys	Gln	Pro	Asp
				380					385					390
Ile	Lys	Asn	Pro	Lys	Leu	Thr	Lys	Asp	Gln	Gln	Thr	Thr	Gly	Ser
				395					400					405
Pro	Ser	Arg	Lys	Thr	Ile	Thr	Ile	Thr	Val	Lys	Ser	Val	Thr	Ser
				410					415					420
Asp	Thr	Ile	His	Ile	Ser	Trp	Lys	Leu	Ala	Leu	Pro	Met	Thr	Ala
				425					430					435
Leu	Arg	Leu	Ser	Trp	Leu	Lys	Leu	Gly	His	Ser	Pro	Ala	Phe	Gly
				440					445					450
Ser	Ile	Thr	Glu	Thr	Ile	Val	Thr	Gly	Glu	Arg	Ser	Glu	Tyr	Leu
				455					460					465
Val	Thr	Ala	Leu	Glu	Pro	Asp	Ser	Pro	Tyr	Lys	Val	Cys	Met	Val
				470					475					480
Pro	Met	Glu	Thr	Ser	Asn	Leu	Tyr	Leu	Phe	Asp	Glu	Thr	Pro	Val
				485					490					495
Cys	Ile	Glu	Thr	Glu	Thr	Ala	Pro	Leu	Arg	Met	Tyr	Asn	Pro	Thr
				500					505					510
Thr	Thr	Leu	Asn	Arg	Glu	Gln	Glu	Lys	Glu	Pro	Tyr	Lys	Asn	Pro
				515					520					525
Asn	Leu	Pro	Leu	Ala	Ala	Ile	Ile	Gly	Gly	Ala	Val	Ala	Leu	Val
				530					535					540
Thr	Ile	Ala	Leu	Leu	Ala	Leu	Val	Cys	Trp	Tyr	Val	His	Arg	Asn

	545		550		555
Gly Ser Leu Phe	Ser Arg Asn Cys Ala	Tyr Ser Lys Gly Arg	Arg		
	560	565	570		
Arg Lys Asp Asp	Tyr Ala Glu Ala Gly	Thr Lys Lys Asp Asn	Ser		
	575	580	585		
Ile Leu Glu Ile	Arg Glu Thr Ser Phe	Gln Met Leu Pro Ile	Ser		
	590	595	600		
Asn Glu Pro Ile	Ser Lys Glu Glu Phe	Val Ile His Thr Ile	Phe		
	605	610	615		
Pro Pro Asn Gly	Met Asn Leu Tyr Lys	Asn Asn His Ser Glu	Ser		
	620	625	630		
Ser Ser Asn Arg	Ser Tyr Arg Asp Ser	Gly Ile Pro Asp Ser	Asp		
	635	640	645		
His Ser His Ser					

<210> 133

<211> 1882

<212> DNA

<213> Homo Sapien

<400> 133

```

ccgtcatccc cctgcagcca cccttcccag agtcctttgc ccaggccacc 50
ccaggcttct tggcagccct gccggggcac ttgtcttcat gtctgccagg 100
gggaggtggg aaggaggtgg gaggagggcg tgcagaggca gtctgggctt 150
ggccagagct caggggtgctg agcgtgtgac cagcagtgag cagaggccgg 200
ccatggccag cctggggctg ctgctcctgc tcttactgac agcactgcca 250
ccgctgtggt cctcctcact gcctgggctg gacactgctg aaagtaaagc 300
caccattgca gacctgatcc tgtctgcgct ggagagagcc accgtcttcc 350
tagaacagag gctgcctgaa atcaacctgg atggcatggt ggggggccga 400
gtgctggaag agcagctaaa aagtgtccgg gagaagtggg cccaggagcc 450
cctgctgcag ccgctgagcc tgcgcgtggg gatgctgggg gagaagctgg 500
aggctgccat ccagagatcc ctccactacc tcaagctgag tgatcccaag 550
tacctaagag agttccagct gaccctccag cccgggtttt ggaagctccc 600
acatgctgg atccacactg atgcctcctt ggtgtacccc acgttcgggc 650
cccaggactc attctcagag gagagaagtg acgtgtgcct ggtgcagctg 700
ctgggaaccg ggacggacag cagcgagccc tgcggcctct cagacctctg 750

```

caggagcctc atgaccaagc ccggctgctc aggctactgc ctgtcccacc 800  
aactgctctt cttcctctgg gccagaatga ggggatgcac acagggacca 850  
ctccaacaga gccaggacta tatcaacctc ttctgcgcca acatgatgga 900  
cttgaaccgc agagctgagg ccatcggata cgcctaccct acccgggaca 950  
tcttcatgga aaacatcatg ttctgtggaa tgggcggtt ctccgacttc 1000  
tacaagctcc ggtggctgga ggccattctc agctggcaga aacagcagga 1050  
aggatgcttc ggggagcctg atgctgaaga tgaagaatta tctaaagcta 1100  
ttcaatatca gcagcatttt tcgaggagag tgaagaggcg agaaaaaaa 1150  
tttccagatt ctgctctgt tgctcaggct ggagtacagt ggcgcaatct 1200  
cggctcactg caacctttgc ctctgggtt caagcaattc tcttgctca 1250  
tcttcccgag tagctgggac tacaggagcg tgccaccata cctggcta 1300  
ttttatattt ttttagtaga gacagggtt catcatgtt ctcatgctgg 1350  
tctcgaactc ctgatctcaa gagatccgcc cacctcaggc tcccaaagt 1400  
tgggattata ggtgtgagcc accgtgtctg gctgaaaagc actttcaaag 1450  
agactgtgtt gaataaagg ccaagggtt tgccaccag cactcatggg 1500  
ggctctctcc cctagatggc tgctctccc acaacacagc cacagcagt 1550  
gcagccctgg gtggcttcct atacatcctg gcagaatacc cccagcaaa 1600  
cagagagcca caccatcca caccgccacc accaagcagc cgctgagacg 1650  
gacggttcca tgccagctgc ctggaggagg aacagacccc tttagtctc 1700  
atcccttaga tcctggaggg cacggatcac atcctgggaa gaaggcatct 1750  
ggaggataag caaagccacc ccgacacca atcttggaag ccctgagtag 1800  
gcagggccag ggtaggtggg ggccgggagg gaccaggtg tgaacggatg 1850  
aataaagttc aactgcaact gaaaaaaaaa aa 1882

<210> 134

<211> 440

<212> PRT

<213> Homo Sapien

<400> 134

Met	Ser	Ala	Arg	Gly	Arg	Trp	Glu	Gly	Gly	Gly	Arg	Arg	Ala	Cys
1				5				10						15

Arg	Gly	Ser	Leu	Gly	Leu	Ala	Arg	Ala	Gln	Gly	Ala	Glu	Arg	Val
				20					25					30

Thr	Ser	Ser	Glu	Gln	Arg	Pro	Ala	Met	Ala	Ser	Leu	Gly	Leu	Leu		35	40	45
Leu	Leu	Leu	Leu	Leu	Thr	Ala	Leu	Pro	Pro	Leu	Trp	Ser	Ser	Ser		50	55	60
Leu	Pro	Gly	Leu	Asp	Thr	Ala	Glu	Ser	Lys	Ala	Thr	Ile	Ala	Asp		65	70	75
Leu	Ile	Leu	Ser	Ala	Leu	Glu	Arg	Ala	Thr	Val	Phe	Leu	Glu	Gln		80	85	90
Arg	Leu	Pro	Glu	Ile	Asn	Leu	Asp	Gly	Met	Val	Gly	Val	Arg	Val		95	100	105
Leu	Glu	Glu	Gln	Leu	Lys	Ser	Val	Arg	Glu	Lys	Trp	Ala	Gln	Glu		110	115	120
Pro	Leu	Leu	Gln	Pro	Leu	Ser	Leu	Arg	Val	Gly	Met	Leu	Gly	Glu		125	130	135
Lys	Leu	Glu	Ala	Ala	Ile	Gln	Arg	Ser	Leu	His	Tyr	Leu	Lys	Leu		140	145	150
Ser	Asp	Pro	Lys	Tyr	Leu	Arg	Glu	Phe	Gln	Leu	Thr	Leu	Gln	Pro		155	160	165
Gly	Phe	Trp	Lys	Leu	Pro	His	Ala	Trp	Ile	His	Thr	Asp	Ala	Ser		170	175	180
Leu	Val	Tyr	Pro	Thr	Phe	Gly	Pro	Gln	Asp	Ser	Phe	Ser	Glu	Glu		185	190	195
Arg	Ser	Asp	Val	Cys	Leu	Val	Gln	Leu	Leu	Gly	Thr	Gly	Thr	Asp		200	205	210
Ser	Ser	Glu	Pro	Cys	Gly	Leu	Ser	Asp	Leu	Cys	Arg	Ser	Leu	Met		215	220	225
Thr	Lys	Pro	Gly	Cys	Ser	Gly	Tyr	Cys	Leu	Ser	His	Gln	Leu	Leu		230	235	240
Phe	Phe	Leu	Trp	Ala	Arg	Met	Arg	Gly	Cys	Thr	Gln	Gly	Pro	Leu		245	250	255
Gln	Gln	Ser	Gln	Asp	Tyr	Ile	Asn	Leu	Phe	Cys	Ala	Asn	Met	Met		260	265	270
Asp	Leu	Asn	Arg	Arg	Ala	Glu	Ala	Ile	Gly	Tyr	Ala	Tyr	Pro	Thr		275	280	285
Arg	Asp	Ile	Phe	Met	Glu	Asn	Ile	Met	Phe	Cys	Gly	Met	Gly	Gly		290	295	300
Phe	Ser	Asp	Phe	Tyr	Lys	Leu	Arg	Trp	Leu	Glu	Ala	Ile	Leu	Ser		305	310	315

Trp	Gln	Lys	Gln	Gln	Glu	Gly	Cys	Phe	Gly	Glu	Pro	Asp	Ala	Glu	
				320					325					330	
Asp	Glu	Glu	Leu	Ser	Lys	Ala	Ile	Gln	Tyr	Gln	Gln	His	Phe	Ser	
				335					340					345	
Arg	Arg	Val	Lys	Arg	Arg	Glu	Lys	Gln	Phe	Pro	Asp	Ser	Arg	Ser	
				350					355					360	
Val	Ala	Gln	Ala	Gly	Val	Gln	Trp	Arg	Asn	Leu	Gly	Ser	Leu	Gln	
				365					370					375	
Pro	Leu	Pro	Pro	Gly	Phe	Lys	Gln	Phe	Ser	Cys	Leu	Ile	Leu	Pro	
				380					385					390	
Ser	Ser	Trp	Asp	Tyr	Arg	Ser	Val	Pro	Pro	Tyr	Leu	Ala	Asn	Phe	
				395					400					405	
Tyr	Ile	Phe	Leu	Val	Glu	Thr	Gly	Phe	His	His	Val	Ala	His	Ala	
				410					415					420	
Gly	Leu	Glu	Leu	Leu	Ile	Ser	Arg	Asp	Pro	Pro	Thr	Ser	Gly	Ser	
				425					430					435	
Gln	Ser	Val	Gly	Leu											
				440											

<210> 135  
 <211> 884  
 <212> DNA  
 <213> Homo Sapien

<400> 135  
 ggtctgagtg cagagctgct gtcattggcgg ccgctctgtg gggcttcttt 50  
 cccgtcctgc tgctgctgct gctatcgggg gatgtccaga gctcggaggt 100  
 gcccggggct gctgctgagg gatcgggagg gagtggggtc ggcataggag 150  
 atcgcttcaa gattgagggg cgtgcagttg ttccaggggt gaagcctcag 200  
 gactggatct cggcggcccg agtgctggta gacggagaag agcacgtcgg 250  
 tttccttaag acagatggga gttttgtggt tcatgatata ctttctggat 300  
 cttatgtagt ggaagttgta tctccagctt acagatttga tcccgttcga 350  
 gtggatatca cttcgaaagg aaaaatgaga gcaagatatg tgaattacat 400  
 caaaacatca gaggttgtca gactgcccta tcctctccaa atgaaatctt 450  
 caggtccacc ttcttacttt attaaaaggg aatcgtgggg ctggacagac 500  
 tttctaataa acccaatggg tatgatgatg gttcttcctt tattgatatt 550  
 tgtgcttctg cctaaagtgg tcaacacaag tgatcctgac atgagacggg 600  
 aaatggagca gtcaatgaat atgctgaatt ccaacctga gttgcctgat 650

gtttctgagt tcatgacaag actcttctct tcaaaatcat ctggcaaadc 700  
tagcagcggc agcagtaaaa caggcaaaag tggggctggc aaaaggaggt 750  
agtcaggccg tccagagctg gcatttgac aaacacggca aactgggtg 800  
gcatccaagt cttgaaaac cgtgtgaagc aactactata aacttgagtc 850  
atcccgacgt tgatctctta caactgtgta tggt 884

<210> 136

<211> 242

<212> PRT

<213> Homo Sapien

<400> 136

Met	Ala	Ala	Ala	Leu	Trp	Gly	Phe	Phe	Pro	Val	Leu	Leu	Leu	Leu	1	5	10	15
Leu	Leu	Ser	Gly	Asp	Val	Gln	Ser	Ser	Glu	Val	Pro	Gly	Ala	Ala	20	25	30	
Ala	Glu	Gly	Ser	Gly	Gly	Ser	Gly	Val	Gly	Ile	Gly	Asp	Arg	Phe	35	40	45	
Lys	Ile	Glu	Gly	Arg	Ala	Val	Val	Pro	Gly	Val	Lys	Pro	Gln	Asp	50	55	60	
Trp	Ile	Ser	Ala	Ala	Arg	Val	Leu	Val	Asp	Gly	Glu	Glu	His	Val	65	70	75	
Gly	Phe	Leu	Lys	Thr	Asp	Gly	Ser	Phe	Val	Val	His	Asp	Ile	Pro	80	85	90	
Ser	Gly	Ser	Tyr	Val	Val	Glu	Val	Val	Ser	Pro	Ala	Tyr	Arg	Phe	95	100	105	
Asp	Pro	Val	Arg	Val	Asp	Ile	Thr	Ser	Lys	Gly	Lys	Met	Arg	Ala	110	115	120	
Arg	Tyr	Val	Asn	Tyr	Ile	Lys	Thr	Ser	Glu	Val	Val	Arg	Leu	Pro	125	130	135	
Tyr	Pro	Leu	Gln	Met	Lys	Ser	Ser	Gly	Pro	Pro	Ser	Tyr	Phe	Ile	140	145	150	
Lys	Arg	Glu	Ser	Trp	Gly	Trp	Thr	Asp	Phe	Leu	Met	Asn	Pro	Met	155	160	165	
Val	Met	Met	Met	Val	Leu	Pro	Leu	Leu	Ile	Phe	Val	Leu	Leu	Pro	170	175	180	
Lys	Val	Val	Asn	Thr	Ser	Asp	Pro	Asp	Met	Arg	Arg	Glu	Met	Glu	185	190	195	
Gln	Ser	Met	Asn	Met	Leu	Asn	Ser	Asn	His	Glu	Leu	Pro	Asp	Val				

	200		205		210
Ser Glu Phe Met Thr Arg Leu Phe Ser Ser Lys Ser Ser Gly Lys					
	215		220		225
Ser Ser Ser Gly Ser Ser Lys Thr Gly Lys Ser Gly Ala Gly Lys					
	230		235		240

Arg Arg

<210> 137  
 <211> 1571  
 <212> DNA  
 <213> Homo Sapien

<400> 137  
 gatggcgcag ccacagcttc tgtgagattc gatttctccc cagttcccct 50  
 gtgggtctga ggggaccaga aggggtgagct acgttggctt tctggaaggg 100  
 gaggctatat gcgtcaattc cccaaaacaa gttttgacat ttcccctgaa 150  
 atgtcattct ctatctattc actgcaagtg cctgctgttc caggccttac 200  
 ctgctgggca ctaacggcgg agccaggatg gggacagaat aaaggagcca 250  
 cgacctgtgc caccaactcg cactcagact ctgaactcag acctgaaatc 300  
 ttctcttcac gggaggcttg gcagtttttc ttactcctgt ggtctccaga 350  
 tttcaggcct aagatgaaag cctctagtct tgccttcagc cttctctctg 400  
 ctgcgtttta tctcctatgg actccttcca ctggactgaa gacactcaat 450  
 ttgggaagct gtgtgatcgc cacaaacctt caggaaatac gaaatggatt 500  
 ttctgagata cggggcagtg tgcaagccaa agatggaaac attgacatca 550  
 gaatcttaag gaggactgag tctttgcaag acacaaagcc tgcgaatcga 600  
 tgctgcctcc tgcgccattt gctaagactc tatctggaca gggatattta 650  
 aaactaccag acccctgacc attatactct ccggaagatc agcagcctcg 700  
 ccaattcctt tcttaccatc aagaaggacc tccggctctc tcatgcccac 750  
 atgacatgcc attgtgggga ggaagcaatg aagaaataca gccagattct 800  
 gagtcacttt gaaaagctgg aacctcaggc agcagttgtg aaggcttttg 850  
 gggaactaga cattcttctg caatggatgg aggagacaga ataggaggaa 900  
 agtgatgctg ctgctaagaa tattcgaggt caagagctcc agtcttcaat 950  
 acctgcagag gaggcgatgac cccaaaccac catctcttta ctgtactagt 1000  
 cttgtgctgg tcacagtgtg tcttatttat gcattacttg cttccttgca 1050

tgattgtctt tatgcatccc caatcttaat tgagaccata cttgtataag 1100  
 atttttgtaa tatctttctg ctattggata tatttattag ttaatatatt 1150  
 tattttatttt ttgctattta atgtatttat ttttttactt ggacatgaaa 1200  
 ctttaaaaaa attcacagat tatattttata acctgactag agcaggtgat 1250  
 gtattttttat acagtaaaaa aaaaaaacct tgtaaattct agaagagtgg 1300  
 ctaggggggt tattcatttg tattcaacta aggacatatt tactcatgct 1350  
 gatgctctgt gagatatttg aaattgaacc aatgactact taggatgggt 1400  
 tgtggaataa gttttgatgt ggaattgcac atctacctta caattactga 1450  
 ccatccccag tagactcccc agtcccataa ttgtgtatct tccagccagg 1500  
 aatcctacac ggccagcatg tatttctaca aataaagttt tctttgcata 1550  
 ccaaaaaaaaa aaaaaaaaaa a 1571

<210> 138  
 <211> 261  
 <212> PRT  
 <213> Homo Sapien

<400> 138  
 Met Arg Gln Phe Pro Lys Thr Ser Phe Asp Ile Ser Pro Glu Met  
 1 5 10 15  
 Ser Phe Ser Ile Tyr Ser Leu Gln Val Pro Ala Val Pro Gly Leu  
 20 25 30  
 Thr Cys Trp Ala Leu Thr Ala Glu Pro Gly Trp Gly Gln Asn Lys  
 35 40 45  
 Gly Ala Thr Thr Cys Ala Thr Asn Ser His Ser Asp Ser Glu Leu  
 50 55 60  
 Arg Pro Glu Ile Phe Ser Ser Arg Glu Ala Trp Gln Phe Phe Leu  
 65 70 75  
 Leu Leu Trp Ser Pro Asp Phe Arg Pro Lys Met Lys Ala Ser Ser  
 80 85 90  
 Leu Ala Phe Ser Leu Leu Ser Ala Ala Phe Tyr Leu Leu Trp Thr  
 95 100 105  
 Pro Ser Thr Gly Leu Lys Thr Leu Asn Leu Gly Ser Cys Val Ile  
 110 115 120  
 Ala Thr Asn Leu Gln Glu Ile Arg Asn Gly Phe Ser Glu Ile Arg  
 125 130 135  
 Gly Ser Val Gln Ala Lys Asp Gly Asn Ile Asp Ile Arg Ile Leu



	140		145		150
Arg Arg Thr Glu	Ser Leu Gln Asp Thr	Lys Pro Ala Asn Arg Cys			
	155	160	165		
Cys Leu Leu Arg	His Leu Leu Arg Leu	Tyr Leu Asp Arg Val Phe			
	170	175	180		
Lys Asn Tyr Gln	Thr Pro Asp His Tyr	Thr Leu Arg Lys Ile Ser			
	185	190	195		
Ser Leu Ala Asn	Ser Phe Leu Thr Ile	Lys Lys Asp Leu Arg Leu			
	200	205	210		
Ser His Ala His	Met Thr Cys His Cys	Gly Glu Glu Ala Met Lys			
	215	220	225		
Lys Tyr Ser Gln	Ile Leu Ser His Phe	Glu Lys Leu Glu Pro Gln			
	230	235	240		
Ala Ala Val Val	Lys Ala Leu Gly Glu	Leu Asp Ile Leu Leu Gln			
	245	250	255		
Trp Met Glu Glu	Thr Glu				
	260				

<210> 139  
 <211> 2395  
 <212> DNA  
 <213> Homo Sapien

<400> 139  
 cctggagccg gaagcgcggc tgcagcaggg cgaggctcca ggtggggtcg 50  
 gttccgcata cagcctagcg tgtccacgat gcggctgggc tccgggactt 100  
 tcgctacctg ttgcgtagcg atcgaggtgc tagggatcgc ggtcttcctt 150  
 cggggattct tcccggctcc cgttcgttcc tctgccagag cggaacacgg 200  
 agcggagccc ccagcgcgcc aaccctcggc tggagccagt tctaactgga 250  
 ccacgctgcc accacctctc ttcagtaaag ttgttattgt tctgatagat 300  
 gccttgagag atgattttgt gtttgggtca aagggtgtga aatttatgcc 350  
 ctacacaact taccttgtgg aaaaaggagc atctcacagt tttgtggctg 400  
 aagcaaagcc acctacagtt actatgcctc gaatcaaggc attgatgacg 450  
 gggagccttc ctggctttgt cgacgtcatc aggaacctca attctcctgc 500  
 actgctggaa gacagtgtga taagacaagc aaaagcagct ggaaaaagaa 550  
 tagtctttta tggagatgaa acctgggtta aattattccc aaagcatttt 600  
 gtggaatatg atggaacaac ctcatTTTTT gtgtcagatt acacagaggt 650

ggataataat gtcacgaggc atttggataa agtattaaaa agaggagatt 700  
gggacatatt aatcctccac tacctggggc tggaccacat tggccacatt 750  
tcagggccca acagccccct gattgggcag aagctgagcg agatggacag 800  
cgtgctgatg aagatccaca cctcactgca gtcgaaggag agagagacgc 850  
ctttacccaa tttgctggtt ctttgtggtg accatggcat gtctgaaaca 900  
ggaagtcacg gggcctcctc caccgaggag gtgaatacac ctctgatttt 950  
aatcagttct gcgtttgaaa ggaaacccgg tgatatccga catccaaagc 1000  
acgtccaata gacggatgtg gctgcgacac tggcgatagc acttggttta 1050  
ccgattccaa aagacagtgt agggagcctc ctattcccag ttgtggaagg 1100  
aagaccaatg agagagcagt tgagatTTTT acatttgaat acagtgcagc 1150  
ttagtaaact gttgcaagag aatgtgccgt catatgaaaa agatcctggg 1200  
tttgagcagt ttaaaatgtc agaaagattg catgggaact ggatcagact 1250  
gtacttgag gaaaagcatt cagaagtcct attcaacctg ggctccaagg 1300  
ttctcaggca gtacctggat gctctgaaga cgctgagctt gtccctgagt 1350  
gcacaagtgg ccagttctc accctgctcc tgctcagcgt cccacaggca 1400  
ctgcacagaa aggctgagct ggaagtccca ctgtcatctc ctgggttttc 1450  
tctgtctttt tatttggtga tcttggttct ttcggccgtt cacgtcattg 1500  
tgtgcacctc agctgaaagt tcgtgctact tctgtggcct ctctgggctg 1550  
gcggcaggct gcctttcggt taccagactc tgggtgaaca cctgggtgtgt 1600  
gccaaagtgt ggcagtgcc tggacagggg gcctcaggga aggacgtgga 1650  
gcagccttat cccaggcctc tgggtgtccc gacacaggtg ttcacatctg 1700  
tgctgtcagg tcagatgcct cagttcttgg aaagctaggt tcttgcgact 1750  
gttaccaagg tgattgtaaa gagctggcgg tcacagagga acaagcccc 1800  
cagctgaggg ggtgtgtgaa tcggacagcc tcccagcaga ggtgtgggag 1850  
ctgcagctga gggagaaga gacaatcggc ctggacactc aggaggggtca 1900  
aaaggagact tggtcgcacc actcatcctg ccacccccag aatgcatact 1950  
gcctcatcag gtccagattt ctttccaagg cggacgtttt ctgttggaat 2000  
tcttagtctt tggcctcgga caccttcatt cgtagctgg ggagtgggtg 2050

tgaggcagtg aagaagaggc ggatgggtcac actcagatcc acagagccca 2100  
 ggatcaaggg acccactgca gtggcagcag gactgttggg cccccacccc 2150  
 aaccctgcac agccctcatc ccctcttggc ttgagccgtc agaggccctg 2200  
 tgctgagtgt ctgaccgaga cactcacagc tttgtcatca gggcacaggc 2250  
 ttctctggag ccaggatgat ctgtgccacg cttgcacctc gggcccatct 2300  
 gggctcatgc tctctctcct gctattgaat tagtacctag ctgcacacag 2350  
 tatgtagtta ccaaagaat aaacggcaat aattgagaaa aaaaa 2395

<210> 140

<211> 310

<212> PRT

<213> Homo Sapien

<400> 140

Met	Arg	Leu	Gly	Ser	Gly	Thr	Phe	Ala	Thr	Cys	Cys	Val	Ala	Ile	1	5	10	15
Glu	Val	Leu	Gly	Ile	Ala	Val	Phe	Leu	Arg	Gly	Phe	Phe	Pro	Ala	20	25	30	
Pro	Val	Arg	Ser	Ser	Ala	Arg	Ala	Glu	His	Gly	Ala	Glu	Pro	Pro	35	40	45	
Ala	Pro	Glu	Pro	Ser	Ala	Gly	Ala	Ser	Ser	Asn	Trp	Thr	Thr	Leu	50	55	60	
Pro	Pro	Pro	Leu	Phe	Ser	Lys	Val	Val	Ile	Val	Leu	Ile	Asp	Ala	65	70	75	
Leu	Arg	Asp	Asp	Phe	Val	Phe	Gly	Ser	Lys	Gly	Val	Lys	Phe	Met	80	85	90	
Pro	Tyr	Thr	Thr	Tyr	Leu	Val	Glu	Lys	Gly	Ala	Ser	His	Ser	Phe	95	100	105	
Val	Ala	Glu	Ala	Lys	Pro	Pro	Thr	Val	Thr	Met	Pro	Arg	Ile	Lys	110	115	120	
Ala	Leu	Met	Thr	Gly	Ser	Leu	Pro	Gly	Phe	Val	Asp	Val	Ile	Arg	125	130	135	
Asn	Leu	Asn	Ser	Pro	Ala	Leu	Leu	Glu	Asp	Ser	Val	Ile	Arg	Gln	140	145	150	
Ala	Lys	Ala	Ala	Gly	Lys	Arg	Ile	Val	Phe	Tyr	Gly	Asp	Glu	Thr	155	160	165	
Trp	Val	Lys	Leu	Phe	Pro	Lys	His	Phe	Val	Glu	Tyr	Asp	Gly	Thr	170	175	180	
Thr	Ser	Phe	Phe	Val	Ser	Asp	Tyr	Thr	Glu	Val	Asp	Asn	Asn	Val				

	185		190		195
Thr Arg His Leu	Asp Lys Val Leu Lys	Arg Gly Asp Trp Asp	Ile		
	200	205	210		
Leu Ile Leu His	Tyr Leu Gly Leu Asp	His Ile Gly His Ile	Ser		
	215	220	225		
Gly Pro Asn Ser	Pro Leu Ile Gly Gln	Lys Leu Ser Glu Met	Asp		
	230	235	240		
Ser Val Leu Met	Lys Ile His Thr Ser	Leu Gln Ser Lys Glu	Arg		
	245	250	255		
Glu Thr Pro Leu	Pro Asn Leu Leu Val	Leu Cys Gly Asp His	Gly		
	260	265	270		
Met Ser Glu Thr	Gly Ser His Gly Ala	Ser Ser Thr Glu Glu	Val		
	275	280	285		
Asn Thr Pro Leu	Ile Leu Ile Ser Ser	Ala Phe Glu Arg Lys	Pro		
	290	295	300		
Gly Asp Ile Arg	His Pro Lys His Val	Gln			
	305	310			

<210> 141  
 <211> 754  
 <212> DNA  
 <213> Homo Sapien

<400> 141  
 ggcacgaggc aagccttcca gggtatcgtg acgcaccttg aaagtctgag 50  
 agctactgcc ctacagaaag ttactagtgc cctaaagctg gcgctggcac 100  
 tgatgttact gctgctgttg gagtacaact tccctataga aaacaactgc 150  
 cagcacctta agaccactca caccttcaga\_gtgaagaact taaacccgaa 200  
 gaaattcagc attcatgacc aggatcacaa agtactggtc ctggactctg 250  
 ggaatctcat agcagttcca gataaaaact acatacgccc agagatcttc 300  
 tttgcattag cctcatcctt gagctcagcc tctgcggaga aaggaagtcc 350  
 gattctcctg ggggtctcta aaggggagtt ttgtctctac tgtgacaagg 400  
 ataaaggaca aagtcattcca tcccttcagc tgaagaagga gaaactgatg 450  
 aagctggctg cccaaaagga atcagcacgc cggcccttca tcttttatag 500  
 ggctcaggtg ggctcctgga acatgctgga gtcggcggct caccgccgat 550  
 ggttcattctg cacctcctgc aattgtaatg agcctgttgg ggtgacagat 600  
 aaatttgaga acaggaaaca cattgaattt tcatttcaac cagtttgcaa 650

agctgaaatg agccccagtg aggtcagcga ttaggaaact gccccattga 700

acgccttcct cgctaatttg aactaattgt ataaaaacac caaacctgct 750

cact 754

<210> 142

<211> 193

<212> PRT

<213> Homo Sapien

<400> 142

Met	Leu	Leu	Leu	Leu	Leu	Glu	Tyr	Asn	Phe	Pro	Ile	Glu	Asn	Asn
1				5					10					15

Cys	Gln	His	Leu	Lys	Thr	Thr	His	Thr	Phe	Arg	Val	Lys	Asn	Leu
				20					25					30

Asn	Pro	Lys	Lys	Phe	Ser	Ile	His	Asp	Gln	Asp	His	Lys	Val	Leu
				35					40					45

Val	Leu	Asp	Ser	Gly	Asn	Leu	Ile	Ala	Val	Pro	Asp	Lys	Asn	Tyr
				50					55					60

Ile	Arg	Pro	Glu	Ile	Phe	Phe	Ala	Leu	Ala	Ser	Ser	Leu	Ser	Ser
				65					70					75

Ala	Ser	Ala	Glu	Lys	Gly	Ser	Pro	Ile	Leu	Leu	Gly	Val	Ser	Lys
				80					85					90

Gly	Glu	Phe	Cys	Leu	Tyr	Cys	Asp	Lys	Asp	Lys	Gly	Gln	Ser	His
				95					100					105

Pro	Ser	Leu	Gln	Leu	Lys	Lys	Glu	Lys	Leu	Met	Lys	Leu	Ala	Ala
				110					115					120

Gln	Lys	Glu	Ser	Ala	Arg	Arg	Pro	Phe	Ile	Phe	Tyr	Arg	Ala	Gln
				125					130					135

Val	Gly	Ser	Trp	Asn	Met	Leu	Glu	Ser	Ala	Ala	His	Pro	Gly	Trp
				140					145					150

Phe	Ile	Cys	Thr	Ser	Cys	Asn	Cys	Asn	Glu	Pro	Val	Gly	Val	Thr
				155					160					165

Asp	Lys	Phe	Glu	Asn	Arg	Lys	His	Ile	Glu	Phe	Ser	Phe	Gln	Pro
				170					175					180

Val	Cys	Lys	Ala	Glu	Met	Ser	Pro	Ser	Glu	Val	Ser	Asp
				185					190			

<210> 143

<211> 961

<212> DNA

<213> Homo Sapien

<400> 143

ctagagagta tagggcagaa ggatggcaga tgagtgactc cacatccaga 50  
gctgcctccc tttaatccag gatcctgtcc ttcctgtcct gtaggagtgc 100  
ctgttgccag tgtgggggtga gacaagtttg tcccacaggg ctgtctgagc 150  
agataagatt aagggtctggg tctgtgtctca attaactcct gtgggcacgg 200  
gggctgggaa gagcaaagtc agcgggtgcct acagtcagca ccatgctggg 250  
cctgccgtgg aaggggaggtc tgtcctgggc gctgctgctg cttctcttag 300  
gctcccagat cctgctgata tatgcctggc atttcacaga gcaaaggac 350  
tgtgatgaac acaatgtcat ggctcgttac ctccctgcc aagtggagtt 400  
tgctgtccac acattcaacc aacagagcaa ggactactat gcctacagac 450  
tggggcacat cttgaattcc tggaaggagc aggtggagtc caagactgta 500  
ttctcaatgg agctactgct ggggagaact aggtgtggga aatttgaaga 550  
cgacattgac aactgccatt tccaagaaag cacagagctg aacaatactt 600  
tcacctgctt cttcaccatc agcaccaggc cctggatgac tcagttcagc 650  
ctcctgaaca agacctgctt ggagggattc cactgagtga aaccactca 700  
caggcttgct catgtgctgc tcccacattc cgtggacatc agcactactc 750  
tcctgaggac tcttcagtgg ctgagcagct ttggacttgt ttgttatcct 800  
atcttgcatg tgtttgagat ctcatatcag tgttttagaa aatccacaca 850  
tcttgagcct aatcatgtag tgtagatcat taaacatcag cattttaaga 900  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 950  
aaaaaaaaa a 961

<210> 144

<211> 147

<212> PRT

<213> Homo Sapien

<400> 144

Met	Leu	Gly	Leu	Pro	Trp	Lys	Gly	Gly	Leu	Ser	Trp	Ala	Leu	Leu
1				5					10				15	

Leu	Leu	Leu	Leu	Gly	Ser	Gln	Ile	Leu	Leu	Ile	Tyr	Ala	Trp	His
				20					25					30

Phe	His	Glu	Gln	Arg	Asp	Cys	Asp	Glu	His	Asn	Val	Met	Ala	Arg
				35					40					45

Tyr	Leu	Pro	Ala	Thr	Val	Glu	Phe	Ala	Val	His	Thr	Phe	Asn	Gln
				50					55					60

Gln	Ser	Lys	Asp	Tyr	Tyr	Ala	Tyr	Arg	Leu	Gly	His	Ile	Leu	Asn	
				65					70					75	
Ser	Trp	Lys	Glu	Gln	Val	Glu	Ser	Lys	Thr	Val	Phe	Ser	Met	Glu	
				80					85					90	
Leu	Leu	Leu	Gly	Arg	Thr	Arg	Cys	Gly	Lys	Phe	Glu	Asp	Asp	Ile	
				95					100					105	
Asp	Asn	Cys	His	Phe	Gln	Glu	Ser	Thr	Glu	Leu	Asn	Asn	Thr	Phe	
				110					115					120	
Thr	Cys	Phe	Phe	Thr	Ile	Ser	Thr	Arg	Pro	Trp	Met	Thr	Gln	Phe	
				125					130					135	
Ser	Leu	Leu	Asn	Lys	Thr	Cys	Leu	Glu	Gly	Phe	His				
				140					145						

<210> 145

<211> 1157

<212> DNA

<213> Homo Sapien

<400> 145

```

ctgtgcagct cgaggctcca gaggcacact ccagagagag ccaagggttct 50
gacgcgatga ggaagcacct gagctggtgg tggctggcca ctgtctgcat 100
gctgctcttc agccacctct ctgcggtcca gacgaggggc atcaagcaca 150
gaatcaagtg gaaccggaag gccctgcccc gcactgcccc gatcactgag 200
gccaggtgg ctgagaaccg cccgggagcc ttcattcaagc aaggccgcaa 250
gctcgacatt gacttcggag ccgagggcaa caggtactac gaggccaact 300
actggcagtt ccccgatggc atccactaca acggctgctc tgaggctaata 350
gtgaccaagg aggcatttgt caccggctgc atcaatgcca ccaggcggc 400
gaaccagggg gagttccaga agccagacaa caagctccac cagcaggtgc 450
tctggcggct ggtccaggag ctctgctccc tcaagcattg cgagttttgg 500
ttggagaggg gcgcaggact tcgggtcacc atgcaccagc cagtgtcct 550
ctgccttctg gctttgatct ggctcatggg gaaataagct tgccaggagg 600
ctggcagtag agagcgcagc agcgagcaaa tcctggcaag tgaccagct 650
cttctcccc aaaccacgc gtgttctgaa ggtgcccagg agcggcgatg 700
cactcgact gcaaatgcc ctcccacgta tgcgccctgg tatgtgctg 750
cgttctgata gatgggggac tgtggcttct ccgtcactcc attctcagcc 800
cctagcagag cgtctggcac actagattag tagtaaatgc ttgatgagaa 850

```

gaacacatca ggcaactgcgc cacctgcttc acagtacttc ccaacaactc 900  
 ttagaggttag gtgtattccc gttttacaga taaggaaact gaggcccaga 950  
 gagctgaagt actgcaccca gcatcaccag ctagaaagtg gcagagccag 1000  
 gattcaaccc tggcttgtct aaccccaggt tttctgctct gtccaattcc 1050  
 agagctgtct ggtgatcact ttatgtctca cagggaccca catccaaaca 1100  
 tgtatctcta atgaaattgt gaaagctcca tgtttagaaa taaatgaaaa 1150  
 cacctga 1157

<210> 146

<211> 176

<212> PRT

<213> Homo Sapien

<400> 146

Met	Arg	Lys	His	Leu	Ser	Trp	Trp	Trp	Leu	Ala	Thr	Val	Cys	Met	1	5	10	15
Leu	Leu	Phe	Ser	His	Leu	Ser	Ala	Val	Gln	Thr	Arg	Gly	Ile	Lys	20	25	30	
His	Arg	Ile	Lys	Trp	Asn	Arg	Lys	Ala	Leu	Pro	Ser	Thr	Ala	Gln	35	40	45	
Ile	Thr	Glu	Ala	Gln	Val	Ala	Glu	Asn	Arg	Pro	Gly	Ala	Phe	Ile	50	55	60	
Lys	Gln	Gly	Arg	Lys	Leu	Asp	Ile	Asp	Phe	Gly	Ala	Glu	Gly	Asn	65	70	75	
Arg	Tyr	Tyr	Glu	Ala	Asn	Tyr	Trp	Gln	Phe	Pro	Asp	Gly	Ile	His	80	85	90	
Tyr	Asn	Gly	Cys	Ser	Glu	Ala	Asn	Val	Thr	Lys	Glu	Ala	Phe	Val	95	100	105	
Thr	Gly	Cys	Ile	Asn	Ala	Thr	Gln	Ala	Ala	Asn	Gln	Gly	Glu	Phe	110	115	120	
Gln	Lys	Pro	Asp	Asn	Lys	Leu	His	Gln	Gln	Val	Leu	Trp	Arg	Leu	125	130	135	
Val	Gln	Glu	Leu	Cys	Ser	Leu	Lys	His	Cys	Glu	Phe	Trp	Leu	Glu	140	145	150	
Arg	Gly	Ala	Gly	Leu	Arg	Val	Thr	Met	His	Gln	Pro	Val	Leu	Leu	155	160	165	
Cys	Leu	Leu	Ala	Leu	Ile	Trp	Leu	Met	Val	Lys	170	175						



<210> 147  
<211> 333  
<212> DNA  
<213> Homo Sapien

<400> 147  
gccttggcct cccaaagggc tgggattata ggcgtgacca ccatgtctgg 50  
tccagagtct catttcctga tgatttatag actcaaagaa aactcatgtt 100  
cagaagctct cttctcttct ggcctcctct ctgtcttctt tccctctttc 150  
ttcttatttt aattagtagc atctactcag agtcatgcaa gctggaaatc 200  
tttcattttg cttgtcagtg gggtaggtca ctgagtcctta gtttttattt 250  
tttgaaattt caactttcag attcaggggg tacatgtgaa ggtttgtttt 300  
atgagtatat tgcgatgatgc tgagggttgg ggt 333

<210> 148  
<211> 73  
<212> PRT  
<213> Homo Sapien

<400> 148  
Met Phe Arg Ser Ser Leu Leu Phe Trp Pro Pro Leu Cys Leu Leu  
1 5 10 15  
Ser Leu Phe Leu Leu Ile Leu Ile Ser Ser Ile Tyr Ser Glu Ser  
20 25 30  
Cys Lys Leu Glu Ile Phe His Phe Ala Cys Gln Trp Gly Arg Ser  
35 40 45  
Leu Ser Leu Ser Phe Tyr Phe Leu Lys Phe Gln Leu Ser Asp Ser  
50 55 60  
Gly Gly Thr Cys Glu Gly Leu Phe Tyr Glu Tyr Ile Ala  
65 70

<210> 149  
<211> 1893  
<212> DNA  
<213> Homo Sapien

<400> 149  
gtctccgcgt cacaggaact tcagcaccca cagggcggac agcgctcccc 50  
tctacctgga gacttgactc ccgcgcgccc caaccctgct tatcccttga 100  
ccgtcgagtg tcagagatcc tgcagccgcc cagtcccggc ccctctcccg 150  
ccccacacc accctcctgg ctcttctgt ttttactcct ccttttcatt 200  
cataacaaaa gctacagctc caggagccca gcgcggggct gtgacccaag 250

ccgagcgtgg aagaatgggg ttctctggga ccggcacttg gattctggtg 300  
ttagtgctcc cgattcaagc tttcccaaaa cctggaggaa gccaagacaa 350  
atctctacat aatagagaat taagtgcaga aagacctttg aatgaacaga 400  
ttgctgaagc agaagaagac aagattaaaa aaacatatcc tccagaaaac 450  
aagccaggtc agagcaacta ttcttttggt gataacttga acctgctaaa 500  
ggcaataaca gaaaaggaaa aaattgagaa agaaagacaa tctataagaa 550  
gctccccact tgataataag ttgaatgtgg aagatgttga ttcaaccaag 600  
aatcgaaaac tgatcgatga ttatgactct actaagagtg gattggatca 650  
taaatttcaa gatgatccag atggtcttca tcaactagac gggactcctt 700  
taaccgctga agacattgtc cataaaatcg ctgccaggat ttatgaagaa 750  
aatgacagag ccgtgtttga caagattggt tctaaactac ttaatctcgg 800  
ccttatcaca gaaagccaag cacatacact ggaagatgaa gtagcagagg 850  
ttttacaaaa attaattctca aaggaagcca acaattatga ggaggatccc 900  
aataagccca caagctggac tgagaatcag gctggaaaaa taccagagaa 950  
agtgactcca atggcagcaa ttcaagatgg tcttgctaag ggagaaaacg 1000  
atgaaacagt atctaacaca ttaaccttga caaatggctt ggaaaggaga 1050  
actaaaacct acagtgaaga caactttgag gaactccaat atttcccaaa 1100  
tttctatgcg ctactgaaaa gtattgattc agaaaaagaa gcaaaaagaga 1150  
aagaaacact gattactatc atgaaaacac tgattgactt tgtgaagatg 1200  
atggtgaaat atggaacaat atctccagaa gaaggtgttt cctaccttga 1250  
aaacttggat gaaatgattg ctcttcagac caaaaacaag ctagaaaaaa 1300  
atgctactga caatataagc aagcttttcc cagcaccatc agagaagagt 1350  
catgaagaaa cagacagtac caaggaagaa gcagctaaga tggaaaagga 1400  
atatggaagc ttgaaggatt ccacaaaaga tgataactcc aaccaggag 1450  
gaaagacaga tgaacccaaa ggaaaaacag aagcctatth ggaagccatc 1500  
agaaaaaata ttgaatgggt gaagaaacat gacaaaaagg gaaataaaga 1550  
agattatgac ctttcaaaga tgagagactt catcaataaa caagctgatg 1600  
cttatgtgga gaaaggcatc cttgacaagg aagaagccga ggccatcaag 1650  
cgcatthata gcagcctgta aaaatggcaa aagatccagg agtctthcaa 1700

ctgtttcaga aaacataata tagcttaaaa cacttctaata tctgtgatta 1750  
aaattttttg acccaagggt tattagaaag tgctgaattt acagtagtta 1800  
acctttttaca agtgggttaaa acatagcttt cttcccgtaa aaactatctg 1850  
aaagtaaagt tgtatgtaag ctgaaaaaaaa aaaaaaaaaa aaa 1893

<210> 150  
<211> 468  
<212> PRT  
<213> Homo Sapien

<400> 150

Met	Gly	Phe	Leu	Gly	Thr	Gly	Thr	Trp	Ile	Leu	Val	Leu	Val	Leu	1	5	10	15
Pro	Ile	Gln	Ala	Phe	Pro	Lys	Pro	Gly	Gly	Ser	Gln	Asp	Lys	Ser	20	25	30	
Leu	His	Asn	Arg	Glu	Leu	Ser	Ala	Glu	Arg	Pro	Leu	Asn	Glu	Gln	35	40	45	
Ile	Ala	Glu	Ala	Glu	Glu	Asp	Lys	Ile	Lys	Lys	Thr	Tyr	Pro	Pro	50	55	60	
Glu	Asn	Lys	Pro	Gly	Gln	Ser	Asn	Tyr	Ser	Phe	Val	Asp	Asn	Leu	65	70	75	
Asn	Leu	Leu	Lys	Ala	Ile	Thr	Glu	Lys	Glu	Lys	Ile	Glu	Lys	Glu	80	85	90	
Arg	Gln	Ser	Ile	Arg	Ser	Ser	Pro	Leu	Asp	Asn	Lys	Leu	Asn	Val	95	100	105	
Glu	Asp	Val	Asp	Ser	Thr	Lys	Asn	Arg	Lys	Leu	Ile	Asp	Asp	Tyr	110	115	120	
Asp	Ser	Thr	Lys	Ser	Gly	Leu	Asp	His	Lys	Phe	Gln	Asp	Asp	Pro	125	130	135	
Asp	Gly	Leu	His	Gln	Leu	Asp	Gly	Thr	Pro	Leu	Thr	Ala	Glu	Asp	140	145	150	
Ile	Val	His	Lys	Ile	Ala	Ala	Arg	Ile	Tyr	Glu	Glu	Asn	Asp	Arg	155	160	165	
Ala	Val	Phe	Asp	Lys	Ile	Val	Ser	Lys	Leu	Leu	Asn	Leu	Gly	Leu	170	175	180	
Ile	Thr	Glu	Ser	Gln	Ala	His	Thr	Leu	Glu	Asp	Glu	Val	Ala	Glu	185	190	195	
Val	Leu	Gln	Lys	Leu	Ile	Ser	Lys	Glu	Ala	Asn	Asn	Tyr	Glu	Glu	200	205	210	
Asp	Pro	Asn	Lys	Pro	Thr	Ser	Trp	Thr	Glu	Asn	Gln	Ala	Gly	Lys				

215					220					225				
Ile	Pro	Glu	Lys	Val	Thr	Pro	Met	Ala	Ala	Ile	Gln	Asp	Gly	Leu
				230					235					240
Ala	Lys	Gly	Glu	Asn	Asp	Glu	Thr	Val	Ser	Asn	Thr	Leu	Thr	Leu
				245					250					255
Thr	Asn	Gly	Leu	Glu	Arg	Arg	Thr	Lys	Thr	Tyr	Ser	Glu	Asp	Asn
				260					265					270
Phe	Glu	Glu	Leu	Gln	Tyr	Phe	Pro	Asn	Phe	Tyr	Ala	Leu	Leu	Lys
				275					280					285
Ser	Ile	Asp	Ser	Glu	Lys	Glu	Ala	Lys	Glu	Lys	Glu	Thr	Leu	Ile
				290					295					300
Thr	Ile	Met	Lys	Thr	Leu	Ile	Asp	Phe	Val	Lys	Met	Met	Val	Lys
				305					310					315
Tyr	Gly	Thr	Ile	Ser	Pro	Glu	Glu	Gly	Val	Ser	Tyr	Leu	Glu	Asn
				320					325					330
Leu	Asp	Glu	Met	Ile	Ala	Leu	Gln	Thr	Lys	Asn	Lys	Leu	Glu	Lys
				335					340					345
Asn	Ala	Thr	Asp	Asn	Ile	Ser	Lys	Leu	Phe	Pro	Ala	Pro	Ser	Glu
				350					355					360
Lys	Ser	His	Glu	Glu	Thr	Asp	Ser	Thr	Lys	Glu	Glu	Ala	Ala	Lys
				365					370					375
Met	Glu	Lys	Glu	Tyr	Gly	Ser	Leu	Lys	Asp	Ser	Thr	Lys	Asp	Asp
				380					385					390
Asn	Ser	Asn	Pro	Gly	Gly	Lys	Thr	Asp	Glu	Pro	Lys	Gly	Lys	Thr
				395					400					405
Glu	Ala	Tyr	Leu	Glu	Ala	Ile	Arg	Lys	Asn	Ile	Glu	Trp	Leu	Lys
				410					415					420
Lys	His	Asp	Lys	Lys	Gly	Asn	Lys	Glu	Asp	Tyr	Asp	Leu	Ser	Lys
				425					430					435
Met	Arg	Asp	Phe	Ile	Asn	Lys	Gln	Ala	Asp	Ala	Tyr	Val	Glu	Lys
				440					445					450
Gly	Ile	Leu	Asp	Lys	Glu	Glu	Ala	Glu	Ala	Ile	Lys	Arg	Ile	Tyr
				455					460					465
Ser Ser Leu														

<210> 151  
 <211> 2598  
 <212> DNA  
 <213> Homo Sapien

<400> 151

cggctcgagg ctccccccag gagaaaggaa cattctgagg ggagtctaca 50  
ccctgtggag ctcaagatgg tcctgagtgg ggcgctgtgc ttccgaatga 100  
aggactcggc attgaagggtg ctttatctgc ataataacca gcttctagct 150  
ggagggctgc atgcagggaa ggtcattaaa ggtgaagaga tcagcgtggt 200  
ccccaatcgg tggctggatg ccagcctgtc ccccgtcac ctaggtgtcc 250  
agggtggaag ccagtgcctg tcatgtgggg tggggcagga gccgactcta 300  
aactagagc cagtgaacat catggagctc tatcttggtg ccaaggaatc 350  
caagagcttc accttctacc ggcgggacat ggggctcacc tccagcttcg 400  
agtcggctgc ctacccgggc tggttcctgt gcacggtgcc tgaagccgat 450  
cagcctgtca gactcaccca gcttcccgag aatggtggct ggaatgcccc 500  
catcacagac ttctacttcc agcagtgtga ctagggaac gtgccccca 550  
gaactccctg ggcagagcca gtcgggtga ggggtgagtg gaggagacc 600  
atggcggaca atcactctct ctgctctcag gacccccacg tctgacttag 650  
tgggcacctg accactttgt cttctggttc ccagtttgga taaattctga 700  
gatttgagc tcagtccacg gtccctcccc actggatggt gctactgctg 750  
tggaaccttg taaaaaccat gtggggtaaa ctgggaataa catgaaaaga 800  
tttctgtggg ggtgggggtg gggagtgggt ggaatcattc ctgcttaatg 850  
gtaactgaca agtggttacc tgagccccgc aggccaacc atccccagtt 900  
gagccttata gggtcagtag ctctccacat gaagtcctgt cactcaccac 950  
tgtgcaggag agggaggtg tcatagagtc agggatctat ggcccttggc 1000  
ccagccccac ccccttcct ttaatcctgc cactgtcata tgctaccttt 1050  
cctatctctt cctcatcat cttgttggtg gcatgaggag gtggtgatgt 1100  
cagaagaaat ggctcgagct cagaagataa aagataagta gggtatgctg 1150  
atcctctttt aaaaacccaa gataaatca aaatcccaga tgctggtctc 1200  
tattcccatg aaaaagtgt catgacatat tgagaagacc tacttacaaa 1250  
gtggcatata ttgcaattta ttttaattaa aagataccta tttatatatt 1300  
tctttataga aaaaagtctg gaagagttta cttcaattgt agcaatgtca 1350  
gggtggtggc agtatagggt atttttcttt taattctgtt aatttatctg 1400

tatttcctaa tttttctaca atgaagatga attccttgta taaaaataag 1450  
aaaagaaatt aatcttgagg taagcagagc agacatcatc tctgattgtc 1500  
ctcagcctcc acttccccag agtaaattca aattgaatcg agctctgctg 1550  
ctctggttgg ttgtagtagt gatcaggaaa cagatctcag caaagccact 1600  
gaggaggagg ctgtgctgag tttgtgtggc tggaatctct gggtaaggaa 1650  
cttaaagaac aaaaatcatc tggttaattct ttcctagaag gatcacagcc 1700  
cctgggattc caaggcattg gatccagtct ctaagaaggc tgctgtactg 1750  
gttgaattgt gtccccctca aattcacatc cttcttgga tctcagtctg 1800  
tgagtttatt tggagataag gtctctgcag atgtagttag ttaagacaag 1850  
gtcatgctgg atgaaggtag acctaaattc aatatgactg gtttccttgt 1900  
atgaaaagga gaggacacag agacagagga gacgcgggga agactatgta 1950  
aagatgaagg cagagatcgg agttttgcag ccacaagcta agaaacacca 2000  
aggattgtgg caaccatcag aagcttgga gaggcaaaga agaattcttc 2050  
cctagaggct ttagagggat aacggctctg ctgaaacctt aatctcagac 2100  
ttccagcctc ctgaacgaag aaagaataaa tttcggctgt tttaagccac 2150  
caaggataat tggttacagc agctctagga aactaataca gctgctaaaa 2200  
tgatccctgt ctctcgtgt ttacattctg tgtgtgtccc ctcccacaat 2250  
gtaccaaagt tgtctttgtg accaatagaa tatggcagaa gtgatggcat 2300  
gccacttcca agattaggtt ataaaagaca ctgcagcttc tacttgagcc 2350  
ctctctctct gccaccacc gcccacaatc tatcttggtc cactcgctct 2400  
gggggaagct agctgccatg ctatgagcag gcctataaag agacttacgt 2450  
ggtaaaaaat gaagtctcct gccacagcc acattagtga acctagaagc 2500  
agagactctg tgagataatc gatgtttgtt gttttaagtt gctcagtttt 2550  
ggtctaactt gttatgcagc aatagataaa taatatgcag agaaagag 2598

<210> 152

<211> 155

<212> PRT

<213> Homo Sapien

<400> 152

Met	Val	Leu	Ser	Gly	Ala	Leu	Cys	Phe	Arg	Met	Lys	Asp	Ser	Ala
1				5					10					15

Leu	Lys	Val	Leu	Tyr	Leu	His	Asn	Asn	Gln	Leu	Leu	Ala	Gly	Gly	
				20					25					30	
Leu	His	Ala	Gly	Lys	Val	Ile	Lys	Gly	Glu	Glu	Ile	Ser	Val	Val	
				35					40					45	
Pro	Asn	Arg	Trp	Leu	Asp	Ala	Ser	Leu	Ser	Pro	Val	Ile	Leu	Gly	
				50					55					60	
Val	Gln	Gly	Gly	Ser	Gln	Cys	Leu	Ser	Cys	Gly	Val	Gly	Gln	Glu	
				65					70					75	
Pro	Thr	Leu	Thr	Leu	Glu	Pro	Val	Asn	Ile	Met	Glu	Leu	Tyr	Leu	
				80					85					90	
Gly	Ala	Lys	Glu	Ser	Lys	Ser	Phe	Thr	Phe	Tyr	Arg	Arg	Asp	Met	
				95					100					105	
Gly	Leu	Thr	Ser	Ser	Phe	Glu	Ser	Ala	Ala	Tyr	Pro	Gly	Trp	Phe	
				110					115					120	
Leu	Cys	Thr	Val	Pro	Glu	Ala	Asp	Gln	Pro	Val	Arg	Leu	Thr	Gln	
				125					130					135	
Leu	Pro	Glu	Asn	Gly	Gly	Trp	Asn	Ala	Pro	Ile	Thr	Asp	Phe	Tyr	
				140					145					150	
Phe	Gln	Gln	Cys	Asp											
				155											

<210> 153

<211> 1152

<212> DNA

<213> Homo Sapien

<400> 153

cttcagaaca ggttctcctt cccagtcac cagttgctcg agttagaatt 50

gtctgcaatg gccgccctgc agaaatctgt gagctctttc cttatgggga 100

ccctggccac cagctgcctc cttctcttgg ccctcttggg acagggagga 150

gcagctgcgc ccatcagctc cactgcagg cttgacaagt ccaacttcca 200

gcagccctat atcaccaacc gcaccttcat gctggctaag gaggctagct 250

tggctgataa caacacagac gttcgtctca ttggggagaa actgttccac 300

ggagtcagta tgagtgagcg ctgctatctg atgaagcagg tgctgaactt 350

cacccttgaa gaagtgctgt tccctcaatc tgatagggtc cagccttata 400

tgcaggaggt ggtgcccttc ctggccaggc tcagcaacag gctaagcaca 450

tgtcatattg aaggtgatga cctgcatatc cagaggaatg tgcaaaagct 500

gaaggacaca gtgaaaaagc ttggagagag tggagagatc aaagcaattg 550

gagaactgga ttgctgttt atgtctctga gaaatgcctg catttgacca 600  
 gagcaaagct gaaaaatgaa taactaacc cctttccctg ctagaaataa 650  
 caattagatg ccccaaagcg atttttttta accaaaagga agatgggaag 700  
 ccaaactcca tcatgatggg tggattccaa atgaaccctt gcgttagtta 750  
 caaaggaaac caatgccact ttgttttata agaccagaag gtagactttc 800  
 taagcataga tatttattga taacatttca ttgtaactgg tgttctatac 850  
 acagaaaaca atttattttt taaataattg tctttttcca taaaaaagat 900  
 tactttccat tccttttaggg gaaaaaaccc ctaaatagct tcatgtttcc 950  
 ataatcagta ctttatattt ataaatgtat ttattattat tataagactg 1000  
 cattttattt atatcatttt attaatatgg atttatttat agaaacatca 1050  
 ttcgatattg ctacttgagt gtaaggctaa tattgatatt tatgacaata 1100  
 attatagagc tataacatgt ttatttgacc tcaataaaca cttggatatc 1150  
 cc 1152

<210> 154

<211> 179

<212> PRT

<213> Homo Sapien

<400> 154

Met	Ala	Ala	Leu	Gln	Lys	Ser	Val	Ser	Ser	Phe	Leu	Met	Gly	Thr
1				5					10					15
Leu	Ala	Thr	Ser	Cys	Leu	Leu	Leu	Leu	Ala	Leu	Leu	Val	Gln	Gly
				20					25					30
Gly	Ala	Ala	Ala	Pro	Ile	Ser	Ser	His	Cys	Arg	Leu	Asp	Lys	Ser
				35					40					45
Asn	Phe	Gln	Gln	Pro	Tyr	Ile	Thr	Asn	Arg	Thr	Phe	Met	Leu	Ala
				50					55					60
Lys	Glu	Ala	Ser	Leu	Ala	Asp	Asn	Asn	Thr	Asp	Val	Arg	Leu	Ile
				65					70					75
Gly	Glu	Lys	Leu	Phe	His	Gly	Val	Ser	Met	Ser	Glu	Arg	Cys	Tyr
				80					85					90
Leu	Met	Lys	Gln	Val	Leu	Asn	Phe	Thr	Leu	Glu	Glu	Val	Leu	Phe
				95					100					105
Pro	Gln	Ser	Asp	Arg	Phe	Gln	Pro	Tyr	Met	Gln	Glu	Val	Val	Pro
				110					115					120



Phe	Leu	Ala	Arg	Leu	Ser	Asn	Arg	Leu	Ser	Thr	Cys	His	Ile	Glu
				125					130					135
Gly	Asp	Asp	Leu	His	Ile	Gln	Arg	Asn	Val	Gln	Lys	Leu	Lys	Asp
				140					145					150
Thr	Val	Lys	Lys	Leu	Gly	Glu	Ser	Gly	Glu	Ile	Lys	Ala	Ile	Gly
				155					160					165
Glu	Leu	Asp	Leu	Leu	Phe	Met	Ser	Leu	Arg	Asn	Ala	Cys	Ile	
				170					175					

<210> 155

<211> 1320

<212> DNA

<213> Homo Sapien

<400> 155

```

ggcttgctga aaataaaatc aggactccta acctgctcca gtcagcctgc 50
ttccacgagg cctgtcagtc agtgcccgac ttgtgactga gtgtgcagtg 100
cccagcatgt accaggtcag tgcagagggc tgcctgaggg ctgtgctgag 150
agggagagga gcagagatgc tgctgagggg ggaggagggc caagctgcca 200
ggtttggggc tggggggccaa gtggagttag aaactgggat cccaggggga 250
gggtgcagat gaggagcgca cccagattag gtgaggacag ttctctcatt 300
agccttttcc tacagggtgg tgcattcttg gcaatggcca tgggaacca 350
cacctacagc cactggccca gctgctgccc cagcaaaggg caggacacct 400
ctgaggagct gctgaggtgg agcactgtgc ctgtgcctcc cctagagcct 450
gctaggccca accgccaccc agagtctgtg agggccagtg aagatggacc 500
cctcaacagc agggccatct cccctggag atatgagttg gacagagact 550
tgaaccggct cccccaggac ctgtaccacg cccgttgccct gtgcccgcac 600
tgcgtcagcc tacagacagg ctcccacatg gacccccggg gcaactcgga 650
gctgctctac cacaaccaga ctgtcttcta caggcgcca tgccatggcg 700
agaagggcac ccacaagggc tactgcctgg agcgaggct gtaccgtgtt 750
tccttagctt gtgtgtgtgt gcggccccgt gtgatgggct agccggacct 800
gctggaggct ggtccctttt tgggaaacct ggagccaggt gtacaaccac 850
ttgccatgaa gggccaggat gccagatgc ttggcccctg tgaagtgtgt 900
tctggagcag caggatcccc ggacaggatg gggggctttg gggaaaacct 950
gcatttctgc acattttgaa aagagcagct gctgcttagg gccgccgga 1000

```

gctggtgtcc tgtcattttc tctcaggaaa ggttttcaaa gttctgccca 1050  
 tttctggagg ccaccactcc tgtctcttcc tcttttccca tcccctgcta 1100  
 ccctggccca gcacaggcac tttctagata tttccccctt gctggagaag 1150  
 aaagagcccc tggttttatt tgtttgttta ctcatcactc agtgagcatc 1200  
 tactttgggt gcattctagt gtagttacta gtcttttgac atggatgatt 1250  
 ctgaggagga agctgttatt gaatgtatag agatttatcc aaataaatat 1300  
 ctttatttaa aaatgaaaaa 1320

<210> 156

<211> 177

<212> PRT

<213> Homo Sapien

<400> 156

Met	Arg	Glu	Arg	Pro	Arg	Leu	Gly	Glu	Asp	Ser	Ser	Leu	Ile	Ser	1	5	10	15
Leu	Phe	Leu	Gln	Val	Val	Ala	Phe	Leu	Ala	Met	Val	Met	Gly	Thr	20	25	30	
His	Thr	Tyr	Ser	His	Trp	Pro	Ser	Cys	Cys	Pro	Ser	Lys	Gly	Gln	35	40	45	
Asp	Thr	Ser	Glu	Glu	Leu	Leu	Arg	Trp	Ser	Thr	Val	Pro	Val	Pro	50	55	60	
Pro	Leu	Glu	Pro	Ala	Arg	Pro	Asn	Arg	His	Pro	Glu	Ser	Cys	Arg	65	70	75	
Ala	Ser	Glu	Asp	Gly	Pro	Leu	Asn	Ser	Arg	Ala	Ile	Ser	Pro	Trp	80	85	90	
Arg	Tyr	Glu	Leu	Asp	Arg	Asp	Leu	Asn	Arg	Leu	Pro	Gln	Asp	Leu	95	100	105	
Tyr	His	Ala	Arg	Cys	Leu	Cys	Pro	His	Cys	Val	Ser	Leu	Gln	Thr	110	115	120	
Gly	Ser	His	Met	Asp	Pro	Arg	Gly	Asn	Ser	Glu	Leu	Leu	Tyr	His	125	130	135	
Asn	Gln	Thr	Val	Phe	Tyr	Arg	Arg	Pro	Cys	His	Gly	Glu	Lys	Gly	140	145	150	
Thr	His	Lys	Gly	Tyr	Cys	Leu	Glu	Arg	Arg	Leu	Tyr	Arg	Val	Ser	155	160	165	
Leu	Ala	Cys	Val	Cys	Val	Arg	Pro	Arg	Val	Met	Gly	170	175					

<210> 157  
<211> 1515  
<212> DNA  
<213> Homo Sapien

<400> 157  
ccggcgatgt cgctcggtgt gctaagcctg gccgcgctgt gcaggagcgc 50  
cgtaccccgga gagccgaccg ttcaatgtgg ctctgaaact gggccatctc 100  
cagagtggat gctacaacat gatctaatacc ccggagactt gagggacctc 150  
cgagtagaac ctgttacaac tagtggtgca acaggggact attcaatttt 200  
gatgaatgta agctgggtac tccgggcaga tgccagcatc cgcttggtga 250  
aggccaccaa gatttggtgt acgggcaaaa gcaacttcca gtctacagc 300  
tgtgtgaggt gcaattacac agaggccttc cagactcaga ccagaccctc 350  
tggtggtaaa tggacatttt cctacatcgg ctccctgtga gagctgaaca 400  
cagtctattt cattggggcc cataatatcc ctaatgcaa tatgaatgaa 450  
gatggccctt ccatgtctgt gaatttcacc tcaccaggct gcctagacca 500  
cataatgaaa tataaaaaaa agtgtgtcaa ggccggaagc ctgtgggatc 550  
cgaacatcac tgcttgtaag aagaatgagg agacagtaga agtgaacttc 600  
acaaccactc ccctgggaaa cagatacatg gctcttatcc aacacagcac 650  
tatcatcggg ttttctcagg tgtttgagcc acaccagaag aaacaaacgc 700  
gagcttcagt ggtgattcca gtgactgggg atagtgaagg tgctacggtg 750  
cagctgactc catattttcc tacttggtggc agcgactgca tccgacataa 800  
aggaacagtt gtgctctgcc cacaacagg cgtccctttc cctctggata 850  
acaacaaaag caagccggga ggctggctgc ctctcctcct gctgtctctg 900  
ctggtggcca catgggtgct ggtggcagg atctatctaa tgtggaggca 950  
cgaaaggatc aagaagactt ctttttctac caccacacta ctgccccca 1000  
ttaaggttct tgtggtttac ccatctgaaa tatgtttcca tcacacaatt 1050  
tgttacttca ctgaatttct tcaaaacat tgacagaagt aggtcatcct 1100  
tgaaaagtgg cagaaaaaga aaatagcaga gatgggtcca gtgcagtggc 1150  
ttgccactca aaagaaggca gcagacaaag tcgtcttcct tctttccaat 1200  
gacgtcaaca gtgtgtgcga tggtagctgt ggcaagagcg agggcagtc 1250  
cagtgagaac tctcaagacc tcttccccct tgcctttaac cttttctgca 1300

gtgatctaag aagccagatt catctgcaca aatacgtggt ggtctacttt 1350  
agagagattg atacaaaaga cgattacaat gctctcagtg tctgccccaa 1400  
gtaccacctc atgaaggatg ccaactgcttt ctgtgcagaa cttctccatg 1450  
tcaagcagca ggtgtcagca ggaaaaagat cacaagcctg ccacgatggc 1500  
tgctgctcct tgtag 1515

<210> 158  
<211> 502  
<212> PRT  
<213> Homo Sapien

<400> 158  
Met Ser Leu Val Leu Leu Ser Leu Ala Ala Leu Cys Arg Ser Ala  
1 5 10 15  
Val Pro Arg Glu Pro Thr Val Gln Cys Gly Ser Glu Thr Gly Pro  
20 25 30  
Ser Pro Glu Trp Met Leu Gln His Asp Leu Ile Pro Gly Asp Leu  
35 40 45  
Arg Asp Leu Arg Val Glu Pro Val Thr Thr Ser Val Ala Thr Gly  
50 55 60  
Asp Tyr Ser Ile Leu Met Asn Val Ser Trp Val Leu Arg Ala Asp  
65 70 75  
Ala Ser Ile Arg Leu Leu Lys Ala Thr Lys Ile Cys Val Thr Gly  
80 85 90  
Lys Ser Asn Phe Gln Ser Tyr Ser Cys Val Arg Cys Asn Tyr Thr  
95 100 105  
Glu Ala Phe Gln Thr Gln Thr Arg Pro Ser Gly Gly Lys Trp Thr  
110 115 120  
Phe Ser Tyr Ile Gly Phe Pro Val Glu Leu Asn Thr Val Tyr Phe  
125 130 135  
Ile Gly Ala His Asn Ile Pro Asn Ala Asn Met Asn Glu Asp Gly  
140 145 150  
Pro Ser Met Ser Val Asn Phe Thr Ser Pro Gly Cys Leu Asp His  
155 160 165  
Ile Met Lys Tyr Lys Lys Lys Cys Val Lys Ala Gly Ser Leu Trp  
170 175 180  
Asp Pro Asn Ile Thr Ala Cys Lys Lys Asn Glu Glu Thr Val Glu  
185 190 195  
Val Asn Phe Thr Thr Thr Pro Leu Gly Asn Arg Tyr Met Ala Leu

200										205					210				
Ile	Gln	His	Ser	Thr	Ile	Ile	Gly	Phe	Ser	Gln	Val	Phe	Glu	Pro					
				215					220					225					
His	Gln	Lys	Lys	Gln	Thr	Arg	Ala	Ser	Val	Val	Ile	Pro	Val	Thr					
				230					235					240					
Gly	Asp	Ser	Glu	Gly	Ala	Thr	Val	Gln	Leu	Thr	Pro	Tyr	Phe	Pro					
				245					250					255					
Thr	Cys	Gly	Ser	Asp	Cys	Ile	Arg	His	Lys	Gly	Thr	Val	Val	Leu					
				260					265					270					
Cys	Pro	Gln	Thr	Gly	Val	Pro	Phe	Pro	Leu	Asp	Asn	Asn	Lys	Ser					
				275					280					285					
Lys	Pro	Gly	Gly	Trp	Leu	Pro	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Val					
				290					295					300					
Ala	Thr	Trp	Val	Leu	Val	Ala	Gly	Ile	Tyr	Leu	Met	Trp	Arg	His					
				305					310					315					
Glu	Arg	Ile	Lys	Lys	Thr	Ser	Phe	Ser	Thr	Thr	Thr	Leu	Leu	Pro					
				320					325					330					
Pro	Ile	Lys	Val	Leu	Val	Val	Tyr	Pro	Ser	Glu	Ile	Cys	Phe	His					
				335					340					345					
His	Thr	Ile	Cys	Tyr	Phe	Thr	Glu	Phe	Leu	Gln	Asn	His	Cys	Arg					
				350					355					360					
Ser	Glu	Val	Ile	Leu	Glu	Lys	Trp	Gln	Lys	Lys	Lys	Ile	Ala	Glu					
				365					370					375					
Met	Gly	Pro	Val	Gln	Trp	Leu	Ala	Thr	Gln	Lys	Lys	Ala	Ala	Asp					
				380					385					390					
Lys	Val	Val	Phe	Leu	Leu	Ser	Asn	Asp	Val	Asn	Ser	Val	Cys	Asp					
				395					400					405					
Gly	Thr	Cys	Gly	Lys	Ser	Glu	Gly	Ser	Pro	Ser	Glu	Asn	Ser	Gln					
				410					415					420					
Asp	Leu	Phe	Pro	Leu	Ala	Phe	Asn	Leu	Phe	Cys	Ser	Asp	Leu	Arg					
				425					430					435					
Ser	Gln	Ile	His	Leu	His	Lys	Tyr	Val	Val	Val	Tyr	Phe	Arg	Glu					
				440					445					450					
Ile	Asp	Thr	Lys	Asp	Asp	Tyr	Asn	Ala	Leu	Ser	Val	Cys	Pro	Lys					
				455					460					465					
Tyr	His	Leu	Met	Lys	Asp	Ala	Thr	Ala	Phe	Cys	Ala	Glu	Leu	Leu					
				470					475					480					
His	Val	Lys	Gln	Gln	Val	Ser	Ala	Gly	Lys	Arg	Ser	Gln	Ala	Cys					

485

490

495

His Asp Gly Cys Cys Ser Leu  
500

&lt;210&gt; 159

&lt;211&gt; 535

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 159

agccaccagc gcaacatgac agtgaagacc ctgcatggcc cagccatggg 50  
caagtacttg ctgctgtcga tattggggct tgcctttctg agtgaggcgg 100  
cagctcggaa aatccccaaa gtaggacata cttttttcca aaagcctgag 150  
agttgcccgc ctgtgccagg aggtagtatg aagcttgaca ttggcatcat 200  
caatgaaaac cagcgcgttt ccatgtcacg taacatcgag agccgctcca 250  
cctccccctg gaattacact gtcacttggg accccaaccg gtaccctcg 300  
gaagttgtac aggcccagtg taggaacttg ggctgcatca atgctcaagg 350  
aaaggaagac atctccatga attccgttcc catccagcaa gagaccctgg 400  
tcgtccggag gaagcaccaa ggctgctctg tttctttcca gttggagaag 450  
gtgctggtga ctgttggtg cacctgcgtc acccctgtca tccaccatgt 500  
gcagtaagag gtgcatatcc actcagctga agaag 535

&lt;210&gt; 160

&lt;211&gt; 163

&lt;212&gt; PRT

&lt;213&gt; Homo Sapien

&lt;400&gt; 160

Met	Thr	Val	Lys	Thr	Leu	His	Gly	Pro	Ala	Met	Val	Lys	Tyr	Leu
1				5					10					15
Leu	Leu	Ser	Ile	Leu	Gly	Leu	Ala	Phe	Leu	Ser	Glu	Ala	Ala	Ala
				20				25						30
Arg	Lys	Ile	Pro	Lys	Val	Gly	His	Thr	Phe	Phe	Gln	Lys	Pro	Glu
				35				40						45
Ser	Cys	Pro	Pro	Val	Pro	Gly	Gly	Ser	Met	Lys	Leu	Asp	Ile	Gly
				50				55						60
Ile	Ile	Asn	Glu	Asn	Gln	Arg	Val	Ser	Met	Ser	Arg	Asn	Ile	Glu
				65				70						75
Ser	Arg	Ser	Thr	Ser	Pro	Trp	Asn	Tyr	Thr	Val	Thr	Trp	Asp	Pro
				80				85						90

Asn	Arg	Tyr	Pro	Ser	Glu	Val	Val	Gln	Ala	Gln	Cys	Arg	Asn	Leu
				95					100					105
Gly	Cys	Ile	Asn	Ala	Gln	Gly	Lys	Glu	Asp	Ile	Ser	Met	Asn	Ser
			110						115					120
Val	Pro	Ile	Gln	Gln	Glu	Thr	Leu	Val	Val	Arg	Arg	Lys	His	Gln
			125						130					135
Gly	Cys	Ser	Val	Ser	Phe	Gln	Leu	Glu	Lys	Val	Leu	Val	Thr	Val
			140						145					150
Gly	Cys	Thr	Cys	Val	Thr	Pro	Val	Ile	His	His	Val	Gln		
			155						160					

<210> 161

<211> 2380

<212> DNA

<213> Homo Sapien

<400> 161

```

acactggcca aacaaaaacg aaagcactcc gtgctggaag taggaggaga 50
gtcaggactc ccaggacaga gagtgcacaa actaccagc acagccccct 100
ccgccccctc tggaggctga agagggatc cagccccctgc caccacaga 150
cacgggctga ctggggtgtc tgccccctt gggggggggc agcacagggc 200
ctcaggcctg ggtgccacct ggcacctaga agatgcctgt gccctggttc 250
ttgctgtcct tggcactggg ccgaagccca gtggtccttt ctctggagag 300
gcttgtgggg cctcaggacg ctaccactg ctctccgggc ctctcctgcc 350
gcctctggga cagtacata ctctgcctgc ctggggacat cgtgcctgct 400
ccgggccccg tgctggcgcc tacgcacctg cagacagagc tgggtgctgag 450
gtgccagaag gagaccgact gtgacctctg tctgcgtgtg gctgtccact 500
tggccgtgca tgggcactgg gaagagcctg aagatgagga aaagtttgga 550
ggagcagctg actcaggggt ggaggagcct aggaatgcct ctctccaggc 600
ccaagtctg ctctccttcc aggctaccc tactgcccgc tgcgtcctgc 650
tggaggtgca agtgccctgct gcccttgtgc agtttggtca gtctgtgggc 700
tctgtggtat atgactgctt cgaggctgcc ctagggagtg aggtacgaat 750
ctggtcctat actcagccca ggtacagaa ggaactcaac cacacacagc 800
agctgcctgc cctgccttg ctcaacgtgt cagcagatgg tgacaacgtg 850
catctggttc tgaatgtctc tgaggagcag cacttcggcc tctccctgta 900
ctggaatcag gtccagggcc ccccaaaacc ccggtggcac aaaaacctga 950

```

ctggaccgca gatcattacc ttgaaccaca cagacctggt tccctgcctc 1000  
tgtattcagg tgtggcctct ggaacctgac tccgttagga cgaacatctg 1050  
ccccttcagg gaggaccccc gcgcacacca gaacctctgg caagccgccc 1100  
gactgcgact gctgaccctg cagagctggc tgctggacgc accgtgctcg 1150  
ctgcccgcag aagcggcact gtgctggcgg gctccgggtg gggaccctg 1200  
ccagccactg gtcccaccgc tttcctggga gaacgtcact gtggacaagg 1250  
ttctcgagtt cccattgctg aaaggccacc ctaacctctg tgttcagggtg 1300  
aacagctcgg agaagctgca gctgcaggag tgcttggtgg ctgactccct 1350  
ggggcctctc aaagacgatg tgctactgtt ggagacacga ggcccccagg 1400  
acaacagatc cctctgtgcc ttggaacca gtggctgtac ttcactacc 1450  
agcaaagcct ccacgagggc agctcgcctt ggagagtact tactacaaga 1500  
cctgcagtca ggccagtgtc tgcagctatg ggacgatgac ttgggagcgc 1550  
tatgggcctg ccccatggac aaatacatcc acaagcgctg ggccctcgtg 1600  
tggetggcct gcctactctt tgccgctgcg ctttcctca tctccttct 1650  
caaaaaggat cacgcgaaag ggtggctgag gctcttgaaa caggacgtcc 1700  
gctcgggggc ggccgccagg ggccgcgcgg ctctgctcct ctactcagcc 1750  
gatgactcgg gtttcgagcg cctggtgggc gccctggcgt cggccctgtg 1800  
ccagctgccg ctgcgcgtgg ccgtagacct gtggagccgt cgtgaactga 1850  
gcgcgcaggg gcccggtggc ttggtttcacg cgcagcggcg ccagaccctg 1900  
caggagggcg gcgtggtggt cttgctcttc tctcccgggt cggtggcgct 1950  
gtgcagcgag tggctacagg atggggtgtc cgggcccggg gcgcacggcc 2000  
cgcacgacgc cttccgcgcc tcgctcagct gcgtgctgcc cgacttcttg 2050  
cagggccggg cgcccggcag ctacgtgggg gcctgcttcg acaggctgct 2100  
ccaccggac gccgtaccg cccttttccg caccgtgcc gtcttcacac 2150  
tgccctccca actgccagac ttcctggggg ccctgcagca gcctcgcgcc 2200  
ccgcgttccg ggcggtcca agagagagcg gagcaagtgt cccgggccct 2250  
tcagccagcc ctggatagct acttccatcc cccggggact cccgcgccg 2300  
gacgcggggt gggaccaggg gcgggacctg gggcggggga cgggacttaa 2350



ataaaggcag acgctgtttt tctaaaaaaa 2380

<210> 162

<211> 705

<212> PRT

<213> Homo Sapien

<400> 162

Met	Pro	Val	Pro	Trp	Phe	Leu	Leu	Ser	Leu	Ala	Leu	Gly	Arg	Ser
1				5					10					15

Pro	Val	Val	Leu	Ser	Leu	Glu	Arg	Leu	Val	Gly	Pro	Gln	Asp	Ala
				20					25					30

Thr	His	Cys	Ser	Pro	Gly	Leu	Ser	Cys	Arg	Leu	Trp	Asp	Ser	Asp
				35					40					45

Ile	Leu	Cys	Leu	Pro	Gly	Asp	Ile	Val	Pro	Ala	Pro	Gly	Pro	Val
				50					55					60

Leu	Ala	Pro	Thr	His	Leu	Gln	Thr	Glu	Leu	Val	Leu	Arg	Cys	Gln
				65					70					75

Lys	Glu	Thr	Asp	Cys	Asp	Leu	Cys	Leu	Arg	Val	Ala	Val	His	Leu
				80					85					90

Ala	Val	His	Gly	His	Trp	Glu	Glu	Pro	Glu	Asp	Glu	Glu	Lys	Phe
				95					100					105

Gly	Gly	Ala	Ala	Asp	Ser	Gly	Val	Glu	Glu	Pro	Arg	Asn	Ala	Ser
				110					115					120

Leu	Gln	Ala	Gln	Val	Val	Leu	Ser	Phe	Gln	Ala	Tyr	Pro	Thr	Ala
				125					130					135

Arg	Cys	Val	Leu	Leu	Glu	Val	Gln	Val	Pro	Ala	Ala	Leu	Val	Gln
				140					145					150

Phe	Gly	Gln	Ser	Val	Gly	Ser	Val	Val	Tyr	Asp	Cys	Phe	Glu	Ala
				155					160					165

Ala	Leu	Gly	Ser	Glu	Val	Arg	Ile	Trp	Ser	Tyr	Thr	Gln	Pro	Arg
				170					175					180

Tyr	Glu	Lys	Glu	Leu	Asn	His	Thr	Gln	Gln	Leu	Pro	Ala	Leu	Pro
				185					190					195

Trp	Leu	Asn	Val	Ser	Ala	Asp	Gly	Asp	Asn	Val	His	Leu	Val	Leu
				200					205					210

Asn	Val	Ser	Glu	Glu	Gln	His	Phe	Gly	Leu	Ser	Leu	Tyr	Trp	Asn
				215					220					225

Gln	Val	Gln	Gly	Pro	Pro	Lys	Pro	Arg	Trp	His	Lys	Asn	Leu	Thr
				230					235					240

Gly	Pro	Gln	Ile	Ile	Thr	Leu	Asn	His	Thr	Asp	Leu	Val	Pro	Cys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

				245					250					255
Leu	Cys	Ile	Gln	Val	Trp	Pro	Leu	Glu	Pro	Asp	Ser	Val	Arg	Thr
				260					265					270
Asn	Ile	Cys	Pro	Phe	Arg	Glu	Asp	Pro	Arg	Ala	His	Gln	Asn	Leu
				275					280					285
Trp	Gln	Ala	Ala	Arg	Leu	Arg	Leu	Leu	Thr	Leu	Gln	Ser	Trp	Leu
				290					295					300
Leu	Asp	Ala	Pro	Cys	Ser	Leu	Pro	Ala	Glu	Ala	Ala	Leu	Cys	Trp
				305					310					315
Arg	Ala	Pro	Gly	Gly	Asp	Pro	Cys	Gln	Pro	Leu	Val	Pro	Pro	Leu
				320					325					330
Ser	Trp	Glu	Asn	Val	Thr	Val	Asp	Lys	Val	Leu	Glu	Phe	Pro	Leu
				335					340					345
Leu	Lys	Gly	His	Pro	Asn	Leu	Cys	Val	Gln	Val	Asn	Ser	Ser	Glu
				350					355					360
Lys	Leu	Gln	Leu	Gln	Glu	Cys	Leu	Trp	Ala	Asp	Ser	Leu	Gly	Pro
				365					370					375
Leu	Lys	Asp	Asp	Val	Leu	Leu	Leu	Glu	Thr	Arg	Gly	Pro	Gln	Asp
				380					385					390
Asn	Arg	Ser	Leu	Cys	Ala	Leu	Glu	Pro	Ser	Gly	Cys	Thr	Ser	Leu
				395					400					405
Pro	Ser	Lys	Ala	Ser	Thr	Arg	Ala	Ala	Arg	Leu	Gly	Glu	Tyr	Leu
				410					415					420
Leu	Gln	Asp	Leu	Gln	Ser	Gly	Gln	Cys	Leu	Gln	Leu	Trp	Asp	Asp
				425					430					435
Asp	Leu	Gly	Ala	Leu	Trp	Ala	Cys	Pro	Met	Asp	Lys	Tyr	Ile	His
				440					445					450
Lys	Arg	Trp	Ala	Leu	Val	Trp	Leu	Ala	Cys	Leu	Leu	Phe	Ala	Ala
				455					460					465
Ala	Leu	Ser	Leu	Ile	Leu	Leu	Leu	Lys	Lys	Asp	His	Ala	Lys	Gly
				470					475					480
Trp	Leu	Arg	Leu	Leu	Lys	Gln	Asp	Val	Arg	Ser	Gly	Ala	Ala	Ala
				485					490					495
Arg	Gly	Arg	Ala	Ala	Leu	Leu	Leu	Tyr	Ser	Ala	Asp	Asp	Ser	Gly
				500					505					510
Phe	Glu	Arg	Leu	Val	Gly	Ala	Leu	Ala	Ser	Ala	Leu	Cys	Gln	Leu
				515					520					525
Pro	Leu	Arg	Val	Ala	Val	Asp	Leu	Trp	Ser	Arg	Arg	Glu	Leu	Ser

	530		535		540
Ala Gln Gly Pro	Val Ala Trp Phe His	Ala Gln Arg Arg Gln Thr			
	545	550		555	
Leu Gln Glu Gly	Gly Val Val Val Leu	Leu Phe Ser Pro Gly Ala			
	560	565		570	
Val Ala Leu Cys	Ser Glu Trp Leu Gln	Asp Gly Val Ser Gly Pro			
	575	580		585	
Gly Ala His Gly	Pro His Asp Ala Phe	Arg Ala Ser Leu Ser Cys			
	590	595		600	
Val Leu Pro Asp	Phe Leu Gln Gly Arg	Ala Pro Gly Ser Tyr Val			
	605	610		615	
Gly Ala Cys Phe	Asp Arg Leu Leu His	Pro Asp Ala Val Pro Ala			
	620	625		630	
Leu Phe Arg Thr	Val Pro Val Phe Thr	Leu Pro Ser Gln Leu Pro			
	635	640		645	
Asp Phe Leu Gly	Ala Leu Gln Gln Pro	Arg Ala Pro Arg Ser Gly			
	650	655		660	
Arg Leu Gln Glu	Arg Ala Glu Gln Val	Ser Arg Ala Leu Gln Pro			
	665	670		675	
Ala Leu Asp Ser	Tyr Phe His Pro Pro	Gly Thr Pro Ala Pro Gly			
	680	685		690	
Arg Gly Val Gly	Pro Gly Ala Gly Pro	Gly Ala Gly Asp Gly Thr			
	695	700		705	

<210> 163

<211> 2478

<212> DNA

<213> Homo. Sapien

<400> 163

```

gtcagtgcgg gaggccggtc agccaccaag atgactgaca ggttcagctc 50
tctgcagcac actaccctca agccacctga tgtgacctgt atctccaaag 100
tgagatcgat tcagatgatt gttcatccta cccccacgcc aatccgtgca 150
ggcgatggcc accggctaac cctggaagac atcttccatg acctgttcta 200
ccacttagag ctccaggtca accgcaccta ccaaatgcac cttggaggga 250
agcagagaga atatgagttc ttcggcctga cccctgacac agagttcctt 300
ggcaccatca tgatttgcgt tccacactgg gccaaaggaga gtgcccccta 350
catgtgccga gtgaagacac tgccagaccg gacatggacc tactccttct 400

```

ccggagcctt cctgttctcc atgggcttcc tcgtcgcagt actctgctac 450  
 ctgagctaca gatatgtcac caagccgcct gcacctcca actccctgaa 500  
 cgtccagcga gtcctgactt tccagccgct gcgcttcac caggagcacg 550  
 tcctgatccc tgtctttgac ctacgcggcc ccagcagtct ggcccagcct 600  
 gtccagtact cccagatcag ggtgtctgga cccagggagc ccgcaggagc 650  
 tccacagcgg catagcctgt ccgagatcac ctacttaggg cagccagaca 700  
 tctccatcct ccagccctcc aacgtgccac ctccccagat cctctcccca 750  
 ctgtcctatg ccccaaacgc tgcccctgag gtcggggccc catcctatgc 800  
 acctcaggtg acccccgaag ctcaattccc attctacgcc ccacaggcca 850  
 tctctaaggt ccagccttcc tcctatgccc ctcaagccac tccggacagc 900  
 tggcctccct cctatggggt atgcatggaa ggttctggca aagactcccc 950  
 cactgggaca ctttctagtc ctaaacacct taggcctaaa ggtcagcttc 1000  
 agaaagagcc accagctgga agctgcatgt taggtggcct ttctctgcag 1050  
 gaggtgacct ccttggctat ggaggaatcc caagaagcaa aatcattgca 1100  
 ccagcccctg gggatttgca cagacagaac atctgacca aatgtgctac 1150  
 acagtgggga ggaagggaca ccacagtacc taaagggcca gctccccctc 1200  
 ctctcctcag tcagatcga gggccacccc atgtccctcc ctttgcaacc 1250  
 tccttcgggt ccattgtccc cctcggacca aggtccaagt ccctggggcc 1300  
 tgctggagtc ccttgtgtgt cccaaggatg aagccaagag cccagcccct 1350  
 gagacctcag acctggagca gccacagaa ctggattctc ttttcagagg 1400  
 cctggccctg actgtgcagt gggagtcctg aggggaatgg gaaaggcttg 1450  
 gtgcttctc cctgtcccta cccagtgtca catccttggc tgtcaatccc 1500  
 atgcctgccc atgccacaca ctctgcgac tggcctcaga cgggtgccct 1550  
 tgagagaagc agagggagtg gcatgcaggg cccctgccat gggcgcgctc 1600  
 ctaccggaa caaagcagca tgataaggac tgcagcgggg gagctctggg 1650  
 gagcagcttg tgtagacaag cgcgtgctcg ctgagccctg caaggcagaa 1700  
 atgacagtgc aaggaggaaa tgcagggaaa ctcccgaggc ccagagcccc 1750  
 acctcctaac accatggatt caaagtgctc aggggaatttg cctctccttg 1800  
 cccattcct ggccagtttc acaatctagc tcgacagagc atgaggcccc 1850

tgcctcttct gtcattgttc aaaggtggga agagagcctg gaaaagaacc 1900  
 aggcctggaa aagaaccaga aggaggctgg gcagaaccag aacaacctgc 1950  
 acttctgcc aagccagggc cagcaggacg gcaggactct agggaggggt 2000  
 gtggcctgca gctcattccc agccagggca actgcctgac gttgcacgat 2050  
 ttcagcttca ttcctctgat agaacaaagc gaaatgcagg tccaccaggg 2100  
 agggagacac acaagccttt tctgcaggca ggagtttcag accctatcct 2150  
 gagaatgggg tttgaaagga aggtgagggc tgtggcccct ggacgggtac 2200  
 aataacacac tgtactgatg tcacaacttt gcaagctctg ccttgggttc 2250  
 agcccatctg ggctcaaatt ccagcctcac cactcacaag ctgtgtgact 2300  
 tcaaacaat gaaatcagt cccagaacct cggtttcctc atctgtaatg 2350  
 tggggatcat aacacctacc tcatggagtt gtggtgaaga tgaaatgaag 2400  
 tcatgtcttt aaagtgctta atagtgcctg gtacatgggc agtgcccaat 2450  
 aaacggtagc tatttaaaaa aaaaaaaa 2478

<210> 164

<211> 574

<212> PRT

<213> Homo Sapien

<400> 164

Met	Arg	Thr	Leu	Leu	Thr	Ile	Leu	Thr	Val	Gly	Ser	Leu	Ala	Ala
1				5					10					15
His	Ala	Pro	Glu	Asp	Pro	Ser	Asp	Leu	Leu	Gln	His	Val	Lys	Phe
				20					25					30
Gln	Ser	Ser	Asn	Phe	Glu	Asn	Ile	Leu	Thr	Trp	Asp	Ser	Gly	Pro
				35					40					45
Glu	Gly	Thr	Pro	Asp	Thr	Val	Tyr	Ser	Ile	Glu	Tyr	Lys	Thr	Tyr
				50					55					60
Gly	Glu	Arg	Asp	Trp	Val	Ala	Lys	Lys	Gly	Cys	Gln	Arg	Ile	Thr
				65					70					75
Arg	Lys	Ser	Cys	Asn	Leu	Thr	Val	Glu	Thr	Gly	Asn	Leu	Thr	Glu
				80					85					90
Leu	Tyr	Tyr	Ala	Arg	Val	Thr	Ala	Val	Ser	Ala	Gly	Gly	Arg	Ser
				95					100					105
Ala	Thr	Lys	Met	Thr	Asp	Arg	Phe	Ser	Ser	Leu	Gln	His	Thr	Thr
				110					115					120
Leu	Lys	Pro	Pro	Asp	Val	Thr	Cys	Ile	Ser	Lys	Val	Arg	Ser	Ile

				125					130					135
Gln	Met	Ile	Val	His	Pro	Thr	Pro	Thr	Pro	Ile	Arg	Ala	Gly	Asp
				140					145					150
Gly	His	Arg	Leu	Thr	Leu	Glu	Asp	Ile	Phe	His	Asp	Leu	Phe	Tyr
				155					160					165
His	Leu	Glu	Leu	Gln	Val	Asn	Arg	Thr	Tyr	Gln	Met	His	Leu	Gly
				170					175					180
Gly	Lys	Gln	Arg	Glu	Tyr	Glu	Phe	Phe	Gly	Leu	Thr	Pro	Asp	Thr
				185					190					195
Glu	Phe	Leu	Gly	Thr	Ile	Met	Ile	Cys	Val	Pro	Thr	Trp	Ala	Lys
				200					205					210
Glu	Ser	Ala	Pro	Tyr	Met	Cys	Arg	Val	Lys	Thr	Leu	Pro	Asp	Arg
				215					220					225
Thr	Trp	Thr	Tyr	Ser	Phe	Ser	Gly	Ala	Phe	Leu	Phe	Ser	Met	Gly
				230					235					240
Phe	Leu	Val	Ala	Val	Leu	Cys	Tyr	Leu	Ser	Tyr	Arg	Tyr	Val	Thr
				245					250					255
Lys	Pro	Pro	Ala	Pro	Pro	Asn	Ser	Leu	Asn	Val	Gln	Arg	Val	Leu
				260					265					270
Thr	Phe	Gln	Pro	Leu	Arg	Phe	Ile	Gln	Glu	His	Val	Leu	Ile	Pro
				275					280					285
Val	Phe	Asp	Leu	Ser	Gly	Pro	Ser	Ser	Leu	Ala	Gln	Pro	Val	Gln
				290					295					300
Tyr	Ser	Gln	Ile	Arg	Val	Ser	Gly	Pro	Arg	Glu	Pro	Ala	Gly	Ala
				305					310					315
Pro	Gln	Arg	His	Ser	Leu	Ser	Glu	Ile	Thr	Tyr	Leu	Gly	Gln	Pro
				320					325					330
Asp	Ile	Ser	Ile	Leu	Gln	Pro	Ser	Asn	Val	Pro	Pro	Pro	Gln	Ile
				335					340					345
Leu	Ser	Pro	Leu	Ser	Tyr	Ala	Pro	Asn	Ala	Ala	Pro	Glu	Val	Gly
				350					355					360
Pro	Pro	Ser	Tyr	Ala	Pro	Gln	Val	Thr	Pro	Glu	Ala	Gln	Phe	Pro
				365					370					375
Phe	Tyr	Ala	Pro	Gln	Ala	Ile	Ser	Lys	Val	Gln	Pro	Ser	Ser	Tyr
				380					385					390
Ala	Pro	Gln	Ala	Thr	Pro	Asp	Ser	Trp	Pro	Pro	Ser	Tyr	Gly	Val
				395					400					405
Cys	Met	Glu	Gly	Ser	Gly	Lys	Asp	Ser	Pro	Thr	Gly	Thr	Leu	Ser

	410		415		420
Ser Pro Lys His	Leu Arg Pro Lys Gly	Gln Leu Gln Lys Glu	Pro		
	425		430		435
Pro Ala Gly Ser	Cys Met Leu Gly Gly	Leu Ser Leu Gln Glu	Val		
	440		445		450
Thr Ser Leu Ala	Met Glu Glu Ser Gln	Glu Ala Lys Ser Leu	His		
	455		460		465
Gln Pro Leu Gly	Ile Cys Thr Asp Arg	Thr Ser Asp Pro Asn	Val		
	470		475		480
Leu His Ser Gly	Glu Glu Gly Thr Pro	Gln Tyr Leu Lys Gly	Gln		
	485		490		495
Leu Pro Leu Leu	Ser Ser Val Gln Ile	Glu Gly His Pro Met	Ser		
	500		505		510
Leu Pro Leu Gln	Pro Pro Ser Gly Pro	Cys Ser Pro Ser Asp	Gln		
	515		520		525
Gly Pro Ser Pro	Trp Gly Leu Leu Glu	Ser Leu Val Cys Pro	Lys		
	530		535		540
Asp Glu Ala Lys	Ser Pro Ala Pro Glu	Thr Ser Asp Leu Glu	Gln		
	545		550		555
Pro Thr Glu Leu	Asp Ser Leu Phe Arg	Gly Leu Ala Leu Thr	Val		
	560		565		570
Gln Trp Glu Ser					

<210> 165

<211> 1060

<212> DNA

<213> Homo Sapien . . . . .

<400> 165

```

tggcctactg gaaaaaaaaa aaaaaaaaaa aaaagtcacc cgggcccgcg 50
gtggccacaa catggctgcg gcgccggggc tgctcttctg gctgttcgtg 100
ctggggggcgc tctggtgggt cccggggccag tcggatctca gccacggacg 150
gcgttttctcg gacctcaaag tgtgcgggga cgaagagtgc agcatgttaa 200
tgtaccgtgg gaaagctctt gaagacttca cgggccctga ttgtcgtttt 250
gtgaatttta aaaaaggtga cgatgtatat gtctactaca aactggcagg 300
gggatccctt gaactttggg ctggaagtgt tgaacacagt tttggatatt 350
ttccaaaaga tttgatcaag gtacttcata aatacacgga agaagagcta 400

```

catattccag cagatgagac agactttgtc tgctttgaag gaggaagaga 450  
tgattttaat agttataatg tagaagagct tttaggatct ttggaactgg 500  
aggactctgt acctgaagag tcgaagaaag ctgaagaagt ttctcagcac 550  
agagagaaat ctctgagga gtctcggggg cgtgaacttg accctgtgcc 600  
tgagcccgag gcattcagag ctgattcaga ggatggagaa ggtgctttct 650  
cagagagcac cgaggggctg cagggacagc cctcagctca ggagagccac 700  
cctcacacca gcggtcctgc ggctaacgct cagggagtgct agtcttcggt 750  
ggacactttt gaagaaattc tgcacgataa attgaaagtg ccgggaagcg 800  
aaagcagaac tggcaatagt tctcctgcct cgggtggagcg ggagaagaca 850  
gatgcttaca aagtcctgaa aacagaaatg agtcagagag gaagtggaca 900  
gtgcggttatt cattacagca aaggatttcg ttggcatcaa aatctaagtt 950  
tgttttacaa agattgtttt tagtactaag ctgccttggc agtttgcatt 1000  
tttgagccaa acaaaaatat attattttcc cttctaagta aaaaaaaaaa 1050  
aaaaaaaaaa 1060

<210> 166

<211> 303

<212> PRT

<213> Homo Sapien

<400> 166

Met	Ala	Ala	Ala	Pro	Gly	Leu	Leu	Phe	Trp	Leu	Phe	Val	Leu	Gly
1				5					10					15
Ala	Leu	Trp	Trp	Val	Pro	Gly	Gln	Ser	Asp	Leu	Ser	His	Gly	Arg
				20					25					30
Arg	Phe	Ser	Asp	Leu	Lys	Val	Cys	Gly	Asp	Glu	Glu	Cys	Ser	Met
				35					40					45
Leu	Met	Tyr	Arg	Gly	Lys	Ala	Leu	Glu	Asp	Phe	Thr	Gly	Pro	Asp
				50					55					60
Cys	Arg	Phe	Val	Asn	Phe	Lys	Lys	Gly	Asp	Asp	Val	Tyr	Val	Tyr
				65					70					75
Tyr	Lys	Leu	Ala	Gly	Gly	Ser	Leu	Glu	Leu	Trp	Ala	Gly	Ser	Val
				80					85					90
Glu	His	Ser	Phe	Gly	Tyr	Phe	Pro	Lys	Asp	Leu	Ile	Lys	Val	Leu
				95					100					105
His	Lys	Tyr	Thr	Glu	Glu	Glu	Leu	His	Ile	Pro	Ala	Asp	Glu	Thr
				110					115					120



Asp	Phe	Val	Cys	Phe	Glu	Gly	Gly	Arg	Asp	Asp	Phe	Asn	Ser	Tyr
				125					130					135
Asn	Val	Glu	Glu	Leu	Leu	Gly	Ser	Leu	Glu	Leu	Glu	Asp	Ser	Val
				140					145					150
Pro	Glu	Glu	Ser	Lys	Lys	Ala	Glu	Glu	Val	Ser	Gln	His	Arg	Glu
				155					160					165
Lys	Ser	Pro	Glu	Glu	Ser	Arg	Gly	Arg	Glu	Leu	Asp	Pro	Val	Pro
				170					175					180
Glu	Pro	Glu	Ala	Phe	Arg	Ala	Asp	Ser	Glu	Asp	Gly	Glu	Gly	Ala
				185					190					195
Phe	Ser	Glu	Ser	Thr	Glu	Gly	Leu	Gln	Gly	Gln	Pro	Ser	Ala	Gln
				200					205					210
Glu	Ser	His	Pro	His	Thr	Ser	Gly	Pro	Ala	Ala	Asn	Ala	Gln	Gly
				215					220					225
Val	Gln	Ser	Ser	Leu	Asp	Thr	Phe	Glu	Glu	Ile	Leu	His	Asp	Lys
				230					235					240
Leu	Lys	Val	Pro	Gly	Ser	Glu	Ser	Arg	Thr	Gly	Asn	Ser	Ser	Pro
				245					250					255
Ala	Ser	Val	Glu	Arg	Glu	Lys	Thr	Asp	Ala	Tyr	Lys	Val	Leu	Lys
				260					265					270
Thr	Glu	Met	Ser	Gln	Arg	Gly	Ser	Gly	Gln	Cys	Val	Ile	His	Tyr
				275					280					285
Ser	Lys	Gly	Phe	Arg	Trp	His	Gln	Asn	Leu	Ser	Leu	Phe	Tyr	Lys
				290					295					300

Asp Cys Phe

<210> 167

<211> 2570

<212> DNA

<213> Homo Sapien

<400> 167

ccaggaccag ggcgcaccgg ctcagcctct cacttgctcag aggccgggga 50

agagaagcaa agcgcaacgg tgtggtccaa gccgggggctt ctgcttcgcc 100

tctaggacat acacgggacc ccctaacttc agtcccccaa acgcgcaccc 150

tcgaagtctt gaactccagc cccgcacatc cacgcgcggc acaggcgcg 200

caggcggcag gtcccgggcg aaggcgatgc gcgcaggggg tcgggcagct 250

gggctcgggc ggcgggagta gggcccggca gggaggcagg gaggctgcat 300

attcagagtc gcgggctgcg ccctgggcag aggccgccct cgctccacgc 350  
aacacctgct gctgccaccg cgccgcgatg agccgcgtgg tctcgctgct 400  
gctgggcgcc gcgctgctct gcggccacgg agccttctgc cgccgcgtgg 450  
tcagcggcca aaaggtgtgt tttgctgact tcaagcatcc ctgctacaaa 500  
atggcctact tccatgaact gtccagccga gtgagctttc aggaggcacg 550  
cctggcttgt gagagtgagg gaggagtcct cctcagcctt gagaatgaag 600  
cagaacagaa gttaatagag agcatgttgc aaaacctgac aaaacccggg 650  
acagggattt ctgatggtga tttctggata gggctttgga ggaatggaga 700  
tgggcaaaca tctggtgcct gcccagatct ctaccagtgg tctgatggaa 750  
gcaattccca gtaccgaaac tggtagacag atgaaccttc ctgcggaagt 800  
gaaaagtgtg ttgtgatgta tcaccaacca actgccaatc ctggccttgg 850  
gggtccctac ctttaccagt ggaatgatga caggtgtaac atgaagcaca 900  
attatatttg caagtatgaa ccagagatta atccaacagc ccctgtagaa 950  
aagccttatc ttacaaatca accaggagac acccatcaga atgtggttgt 1000  
tactgaagca ggtataattc ccaatctaata ttatgttgtt ataccaacaa 1050  
taccctgct cttactgata ctggttgctt ttggaacctg ttgtttccag 1100  
atgctgcata aaagtaaagg aagaacaaaa actagtccaa accagtctac 1150  
actgtggatt tcaaagagta ccagaaaaga aagtggcatg gaagtataat 1200  
aactcattga cttggttcca gaattttgta attctggatc tgtataagga 1250  
atggcatcag aacaatagct tggaatggct tgaaatcaca aaggatctgc 1300  
aagatgaact gtaagctccc ccttgaggca aatattaaag taatttttat 1350  
atgtctatta tttcatttaa agaatatgct gtgctaataa tggagtgaga 1400  
catgcttatt ttgctaaagg atgcacccaa acttcaaact tcaagcaaata 1450  
gaaatggaca atgcagataa agttgttatc aacacgtcgg gagtatgtgt 1500  
gttagaagca attcctttta tttctttcac ctttcataag ttgttatcta 1550  
gtcaatgtaa tgtatattgt attgaaatth acagtgtgca aaagtatttt 1600  
acctttgcat aagtgtttga taaaaatgaa ctgttctaata atttattttt 1650  
atggcatctc atttttcaat acatgctctt ttgattaaag aaacttatta 1700  
ctgttgtaaa ctgaattcac acacacacaa atatagtacc atagaaaaag 1750

tttgttttct cgaaataatt catcttttcag cttctctgct tttgggtcaat 1800  
 gtctaggaaa tctcttcaga aataagaagc tatttcatta agtgtgatat 1850  
 aaacctcctc aaacatttta cttagaggca aggattgtct aatttcaatt 1900  
 gtgcaagaca tgtgccttat aattatTTTT agcttaaaat taaacagatt 1950  
 ttgtaataat gtaactttgt taataggtgc ataaacacta atgcagtcaa 2000  
 tttgaacaaa agaagtgaca tacacaatat aaatcatatg tcttcacacg 2050  
 ttgcctatat aatgagaagc agctctctga gggttctgaa atcaatgtgg 2100  
 tccctctctt gccactaaa caaagatggg tgttcggggg ttgggattga 2150  
 cactggaggc agatagttgc aaagttagtc taaggtttcc ctagctgtat 2200  
 ttagcctctg actatattag tatacaaaga ggtcatgtgg ttgagaccag 2250  
 gtgaatagtc actatcagtg tggagacaag cacagcacac agacatttta 2300  
 ggaaggaaaag gaactacgaa atcgtgtgaa aatgggttgg aacccatcag 2350  
 tgatcgcata ttcattgatg agggtttgct tgagatagaa aatggtggct 2400  
 cttttctgtc ttatctccta gtttcttcaa tgcttacgcc ttgttcttct 2450  
 caagagaaaag ttgtaactct ctgggtcttca tatgtccctg tgctcctttt 2500  
 aaccaaataa agagttcttg tttctggggg aaaaaaaaaa aaaaaaaaaa 2550  
 aaaaaaaaaa aaaaaaaaaa 2570

<210> 168

<211> 273

<212> PRT

<213> Homo Sapien

<400> 168

Met	Ser	Arg	Val	Val	Ser	Leu	Leu	Leu	Gly	Ala	Ala	Leu	Leu	Cys
1				5					10					15
Gly	His	Gly	Ala	Phe	Cys	Arg	Arg	Val	Val	Ser	Gly	Gln	Lys	Val
				20					25					30
Cys	Phe	Ala	Asp	Phe	Lys	His	Pro	Cys	Tyr	Lys	Met	Ala	Tyr	Phe
				35					40					45
His	Glu	Leu	Ser	Ser	Arg	Val	Ser	Phe	Gln	Glu	Ala	Arg	Leu	Ala
				50					55					60
Cys	Glu	Ser	Glu	Gly	Gly	Val	Leu	Leu	Ser	Leu	Glu	Asn	Glu	Ala
				65					70					75
Glu	Gln	Lys	Leu	Ile	Glu	Ser	Met	Leu	Gln	Asn	Leu	Thr	Lys	Pro
				80					85					90

Gly	Thr	Gly	Ile	Ser	Asp	Gly	Asp	Phe	Trp	Ile	Gly	Leu	Trp	Arg	95	100	105
Asn	Gly	Asp	Gly	Gln	Thr	Ser	Gly	Ala	Cys	Pro	Asp	Leu	Tyr	Gln	110	115	120
Trp	Ser	Asp	Gly	Ser	Asn	Ser	Gln	Tyr	Arg	Asn	Trp	Tyr	Thr	Asp	125	130	135
Glu	Pro	Ser	Cys	Gly	Ser	Glu	Lys	Cys	Val	Val	Met	Tyr	His	Gln	140	145	150
Pro	Thr	Ala	Asn	Pro	Gly	Leu	Gly	Gly	Pro	Tyr	Leu	Tyr	Gln	Trp	155	160	165
Asn	Asp	Asp	Arg	Cys	Asn	Met	Lys	His	Asn	Tyr	Ile	Cys	Lys	Tyr	170	175	180
Glu	Pro	Glu	Ile	Asn	Pro	Thr	Ala	Pro	Val	Glu	Lys	Pro	Tyr	Leu	185	190	195
Thr	Asn	Gln	Pro	Gly	Asp	Thr	His	Gln	Asn	Val	Val	Val	Thr	Glu	200	205	210
Ala	Gly	Ile	Ile	Pro	Asn	Leu	Ile	Tyr	Val	Val	Ile	Pro	Thr	Ile	215	220	225
Pro	Leu	Leu	Leu	Leu	Ile	Leu	Val	Ala	Phe	Gly	Thr	Cys	Cys	Phe	230	235	240
Gln	Met	Leu	His	Lys	Ser	Lys	Gly	Arg	Thr	Lys	Thr	Ser	Pro	Asn	245	250	255
Gln	Ser	Thr	Leu	Trp	Ile	Ser	Lys	Ser	Thr	Arg	Lys	Glu	Ser	Gly	260	265	270

Met Glu Val

<210> 169

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 169

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 170

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 170

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41